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ABSTRACT

The purpose of this practicum was training faculty to enhance incorporation of technology into classroom teaching and learning by becoming comfortable and efficient with the equipment and software available for their use, while providing quality professional development experiences, earning continuing education units, through a distance delivery, any time/any place learning mechanism. The training consisted of two different components: hands-on face-to-face training and distance delivery training via the Internet. The main focus of the hands-on training was to equip the participants with the necessary skills needed to effectively utilize the technology available to them and prepare them for the distance delivery portion of the practicum. This was accomplished through the use of the Web site, created for this study, linked from the school district home page. Each component of the Web site was an important tool for aiding participants in successful completion of the training. Hands-on skills' training was an integral part of preparing the participants for the training to be completed by distance delivery. Also included in this phase was training on the use of electronic chat software and threaded discussion board techniques to be used by participants for interaction, communication, and collaboration during the distance delivery phase. Web page development was an essential part of the practicum component. By the end of the practicum, every represented school had a presence on the Web and every participant had a personal home page. Ten tables and figures illustrate findings. Appendices include county school district instructional faculty surveys, memos, sample post-test, printouts of technology for teachers web site, monthly instructional modules from web site, main pages of school web site collaboratory projects, technology for teachers discussion board, participant certificate, evaluation instrument, and electronic weekly activity log. (AEF)

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ED 423 878

Development and Implementation of a Distance Delivery Program for Training District Instructional Employees in the Use of the Internet and E-Mail for Research, Professional Development, and Incorporation of Technology into the Curriculum

By
Debra L. Pahal
Cluster 2

An Applied Dissertation Presented to
the Ed.D. Program in Instructional Technology and Distance Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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Nova Southeastern University
1998

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APPROVAL PAGE

This practicum took place as described.

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This practicum report was submitted by Debra L. Pahal under the direction of the advisor listed below. It was submitted to the Ed.D. Program in Instructional Technology and Distance Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

Approved:

8/5/98
Date of Final Approval of Report

Dr. Richard Goldman, Advisor

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ABSTRACT

Development and Implementation of a Distance Delivery Program for Training District Instructional Employees in the Use of the Internet and E-mail for Research, Professional Development, and Incorporation of Technology into the Curriculum. Pahal, Debra L., 1998: Applied Dissertation, Nova Southeastern University, Ed.D. Program in Instructional Technology and Distance Education. Internet Training/Rural Schools/ E-mail Training/Technology Infusion/Distance Education/Professional Development.

Schools in the author's school district are as far as 35 miles apart in distance and all schools have been placed on-line to the Internet; however, teachers are not effectively utilizing the valuable research tools of the Internet and communications tools of e-mail available right at their own classroom workstations for incorporation of technology into the curriculum, telecommunications, professional development, or classroom teaching/learning enhancement. The main purpose of the author's practicum was training faculty to enhance incorporation of technology into classroom teaching and learning by becoming comfortable and efficient with the equipment and software available for their use, while providing quality professional development experiences, earning continuing education units, through a distance delivery, any time/any place learning mechanism.

The training was comprised of two different components: hands-on face-to-face training and distance delivery training via the Internet. The main focus of the hands-on training was to equip the participants with the necessary skills needed to effectively utilize the technology available to them and prepare them for the distance delivery portion of the practicum. This was accomplished through use of the author-created web site linked from the school district home page.

Each component of the web site was an important tool for aiding participants in successful completion of the training. Hands-on skills' training was an integral part of preparing the participants for the training to be completed by distance delivery. Also included in this phase was training on the use of electronic chat software and threaded discussion board techniques to be used by all participants for interaction, communication, and collaboration during the distance delivery phase. Web page development was an essential part of the practicum component. By the end of the practicum, every represented school had a presence on the web and every participant had a personal home page.

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Chapter I: Introduction

Description of Community

The community in which the author's practicum took place is located in a small rural county in the southeastern section of the United States. According to 1995 census data, the total population of the county was approximately 16,000 persons, with a ratio of 50% white, 40% black and 10% Hispanic and other origins. The county comprises several outlying areas that span more than a 35-mile radius in distance and is located within 45 miles of the state's capitol and several large state universities and community colleges.

The community has undergone tremendous growth within the past ten years due to a rapid expansion of the government, business, and industry sector located within the county. The largest employer in the community is a cellulose product manufacturing plant and its subsidiaries, with 1300 employees. The school district is the second largest employer in the community, with 525 total employees. The third largest employer is a state maximum-security correctional facility, with 515 employees. The fourth largest employer is the local hospital, with 200 employees. The fifth largest employer is a Federal Government-operated pyrotechnics plant, with 180 employees.

The per capita personal income of the area is $13,690, which is 25% below the state's per capita of $18,539, with unemployment 2% above the state's average, based on 1995 figures available from the County Developmental Authority.

Writer's Work Setting

The work setting in which this practicum took place spans the entire school district where the author is employed. The targeted population of the author's practicum was comprised of the 100 classroom-based teachers located at schools within the entire

district. Based on a September 1997 author-created survey-questionnaire instrument distributed to instructional staff members to determine training needs, 80% of the respondents stated they would like to participate in this type training when offered. However it was expected--based largely upon participation in past training experiences in the same school district--that approximately 50% of the staff would actually participate in this training experience.

The county school district has 525 employees--100 administrative, 250 non-instructional, and 175 instructional employees (including guidance counselors, resource teachers, deans, personnel specialists, student services specialists, financial aid counselors and occupational specialists), of which 100 are classroom-based teachers.

This school district is unique in the fact that of the county's 10 schools, 4 are centralized and serve the entire county--a middle school, a high school, an educational academy and an adult vocational-technical center, which also serves citizens of the community based in the local nursing facility and retarded citizens' center. There are six other schools in the district, including one Pre-K school, one Headstart center, three elementary schools, and one primary school, located in various locations within the county. The Educational Academy serves the county by placing at-risk youth into a controlled academic environment where learning is stressed and counseling for behavioral problems is given top priority and the Pre-K center serves teenage parents whose small children are kept for free while the parent is in school--making these factors also unique qualities of the school district.

Another uniqueness of the school district was identified in the fact that a strong, localized partnership between business, industry, private, and governmental sector

agencies within the community has increased the overall effectiveness of education while also increasing community awareness and support of the district's endeavors.

Based on the School Board approved District Technology Plan (DTP) of August 1996, there were 4,343 total students enrolled in district schools, of which 56% were female and 44% were male.

The technological mission of the school district, as stated in the August 1996 DTP, is centered in a strong belief in the effective use of technology to provide students with the most relevant learning environment possible; and the plan strives to provide teachers with the tools and skills needed for proficient and up-to-date instruction in a rapidly-changing world. According to the DTP there were 1,200 computers located throughout the district, used for student, teacher and administrative access. Of these 1200 computers, 71% were designated for student instructional use and 29% were for faculty and administrative use. According to a 1997-98 school year survey, approximately 15% of the computers may be outdated or in need or repair and were used only for teaching keyboarding or playing educational games.

Goals of the DTP of August 1996 included the following: (a) to provide computer access to every student, teacher, and related support worker (b) to design and implement a communication system providing access between students, schools, homes, and international education networks (c) to provide the necessary support infrastructure to meet needs for in-service and training and (d) to provide access to the global community from the classroom.

Writer's Role

The role of the author in relationship to this practicum was to implement a solution to improve the use of technology--on a daily basis for classroom teaching/learning enhancement and incorporation of technology into the curriculum--among district teachers, utilizing the equipment and software currently available in the district, while providing quality professional development experiences.

As the author has been the key person within the school district called upon in the past four years to provide teacher technology training, the author served as developer, coordinator, and instructor for the basic microcomputer skills training and the monthly distance delivery instructional modules.

As the author currently serves as web administrator for her home-based school within the district web site, the author also served as web administrator for the distance delivery site linked from the school district home page and completed routine maintenance and file transfer of informational updates to the site on a regular basis as needed throughout the eight-month implementation phase of this practicum.

As a key district teacher technology trainer for the past four years, the author served as the training coordinator for continuing education credit units (CEUs) to be awarded to instructional staff members who completed the monthly training for professional development. As a major function of this role, the author assumed the responsibility of developing and evaluating challenging monthly course instruction that served to enhance district instructional employees' technological skills while providing essential instruction for meeting state-mandated goals in regard to incorporation of technology into the curriculum.

Chapter II: Study of the Problem

Problem Statement

The author identified the problem as follows: Schools in the district are as far as 35 miles apart in distance and all schools have been placed on-line to the Internet, however, teachers are not effectively utilizing the valuable research tools of the Internet and communications tools of e-mail available right at their own classroom work stations for incorporation of technology into the curriculum, telecommunications, professional development, or classroom teaching/learning enhancement.

Problem Description

The current existence of the problem within the author's school district was based on numerous identified factors discussed in the following paragraphs.

Some teachers felt isolated from district-wide activities due to the remoteness of their physical school sites, as schools in the district are as far as 35 miles apart in distance and time involved in travelling to and from schools is costly to the district.

Some schools in the district have only been wired to the Internet within the last school year, while some have been on-line for several years, accounting for a widespread mix in skill levels. Those teachers working at schools where wiring was only recently completed generally had little or no formal training and possessed only self-taught experience with using the Internet or e-mail.

Teachers were neither properly nor efficiently using the equipment/software installed on their classroom workstations for routine classroom records maintenance or enhancement of classroom presentations. Teachers have not received adequate training for proper research skills using Internet search engines to facilitate finding ways to effectively

incorporate technology into their curriculum. Also, teachers have not received adequate training in the use of e-mail for communication purposes.

Time, distance and budget restraints hindered teachers from receiving technology training for meeting state mandates and for renewal of teaching certificates. Some district teachers felt threatened, as their students seemed more adept at technology than they themselves, as little time was built into their daily schedules for professional development activities. Even though the DTP strongly advocated the availability of technology training, evidence suggested the lack of it to be more the case.

Problem Documentation

Evidence described by the author that proved the problem existed is documented in the following paragraphs.

To determine training needs and the current existence of the problem, the author created a survey instrument (See Appendix A). District Principals were sent a cover memo (See Appendix B) explaining the instrument and asking permission to distribute the survey to the instructional staff. After surveys were returned, a thank you memo (See Appendix C) was then sent to the Principals.

Results of the September 1997 author-prepared survey conducted through teacher self-rating, with 91% of the teachers responding, are summarized in the following paragraphs and graphs.

Question one asked the teachers to check all microcomputer areas that they had a basic working knowledge of, including word processing, spreadsheet, database, graphics/presentations, Internet navigation, and e-mail software (multiple responses were permitted). Of the total respondents, 80% of the instructional staff claimed to have had

basic word processing skills; 23% of the staff claim to have had spreadsheet skills; 33% of the staff claim to have had database skills; 36% of the staff claim to have had graphics/presentation software skills; 45% of the staff claim to have had Internet navigational software skills; 41% of the staff claim to have had e-mail skills; and 10% of the staff did not respond to the question. The author assumed that a non-response indicated none of the skills mentioned had been acquired. Graphical presentation of this information is depicted in Figure 1.

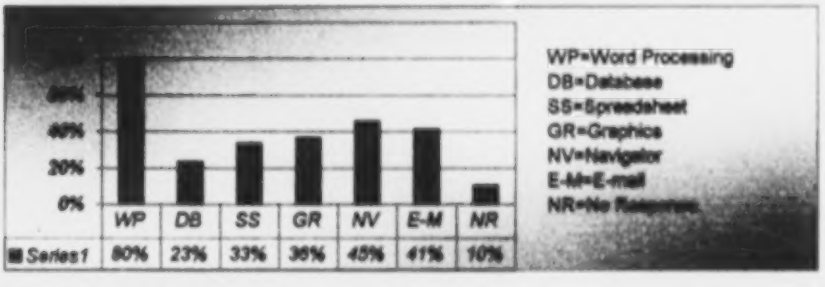

Figure 1. Types of Software Skills Possessed by Faculty

Question two asked how often the Internet was used. Of the total respondents, 16% used the Internet less than half an hour a day; 40% had never used the Internet; 32% used the Internet as often as possible; 8% used the Internet only if absolutely necessary; and 4% did not respond to the question. The author assumed that a non-response indicated non-use of the Internet. A Graphical presentation is depicted in Figure 2.

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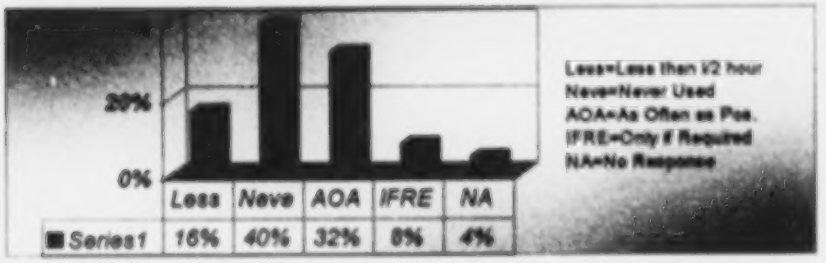
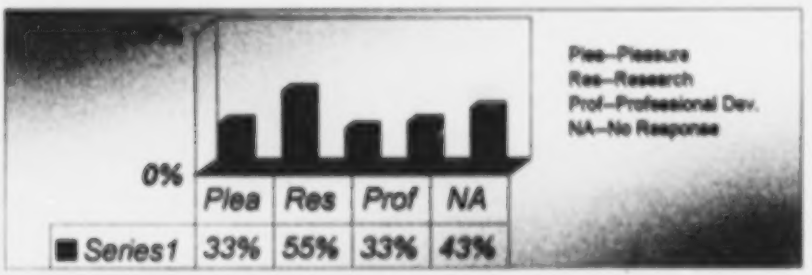


Question 2--Faculty Survey

Figure 2. How Often the Internet is Used by Faculty

Question three asked the teachers to categorize the type of use made of the Internet if they responded positively to question two (multiple responses were permitted). Of the total respondents, 33% used the Internet for pleasure; 55% used the Internet for research and reference; 29% used the Internet for classroom instructional purposes; 33% used the Internet for professional development; and 43% did not respond to the question. The author assumed that a non-response indicated non-use of the Internet. Graphical presentation of this information is depicted in Figure 3.



Question 3--Faculty Survey

Figure 3. What Internet is Used For by Faculty

Question four asked how the Internet was accessed (multiple responses were permitted). Of the total respondents, 35% stated they used the school account provided

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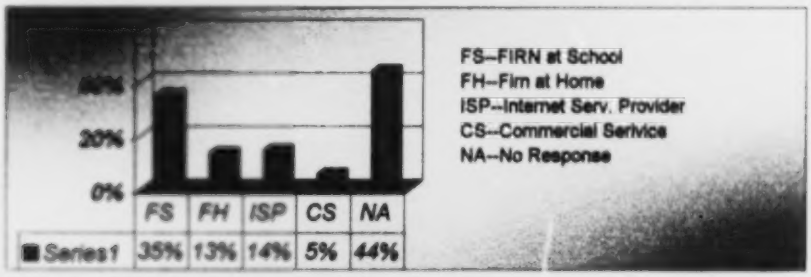
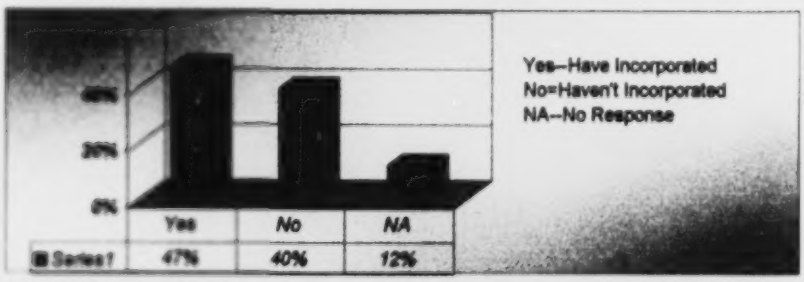
free by the State Department of Education; 13% used the account provided free by the State Department of Education on their home computers; 14% used an Internet Service Provider; 5% used a subscription commercial on-line service such as America-On-Line or CompuServe; 44% did not respond to the question. The author assumed that a non-response indicated non-use of the Internet. Graphical presentation is depicted in Figure 4.



Question 4--Faculty Survey

Figure 4. How the Internet is Accessed by Faculty

Question five asked whether or not the teachers had incorporated any form of microcomputer technology into their classroom curriculum. If the answer was yes, they were asked to list how. Of the total respondents, 47% answered yes; 40% answered no; and 12% did not respond to the question. The author assumed that a non-response indicated non-incorporation of technology into the curriculum. The written responses received were used to develop ideas for monthly instructional modules. A Graphical presentation is depicted in Figure 5.



Question 5--Faculty Survey

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Question six asked whether or not the teachers used e-mail for communication purposes either at home or at school. Of the total respondents, 51% answered yes; 46% answered no; and 2% did not respond. The author assumed that a non-response indicated non-use of e-mail for communication purposes either at home or school. A Graphical presentation is depicted in Figure 6.

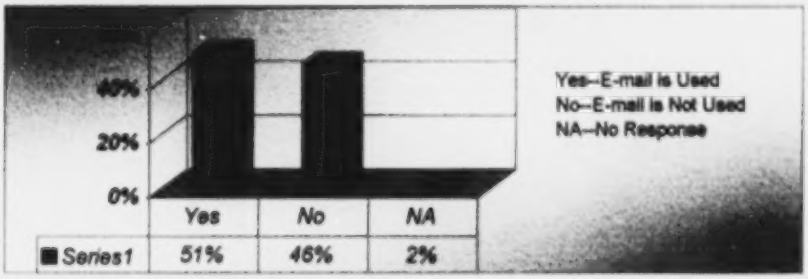

Figure 6. Whether or Not E-mail is Used by Faculty

Question seven asked about familiarity with Internet search engines. If the answer was yes, teachers were asked to list some search engines used. Of the total respondents, 37% answered yes; 45% answered no; and 16% did not respond. The author assumed that a non-response indicated non-familiarity with search engines. Graphical presentation is depicted in Figure 7.

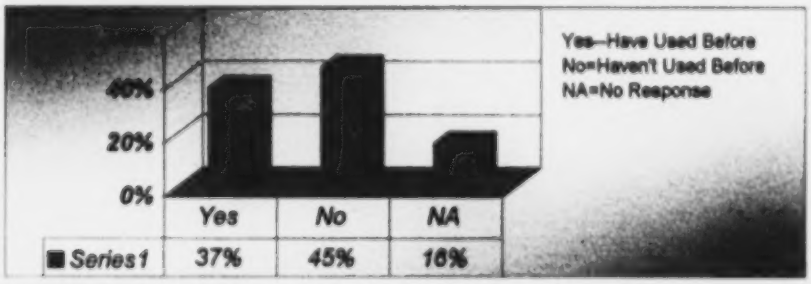

Figure 7. Faculty's Use of Internet Search Engines

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Question eight asked if the teachers would be interested in participating in a course on Internet, e-mail, and technology incorporation. Of the total respondents, 80% answered yes; 18% answered no; and 2% did not respond. The author assumed that a non-response indicated non-interest. Graphical presentation is depicted in Figure 8.

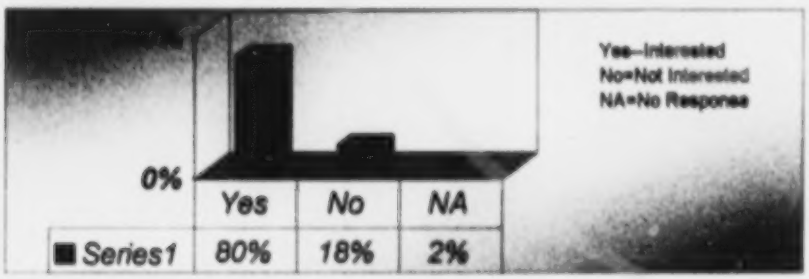

Figure 8. Faculty's Interest in Continuing Ed. Course

Question nine asked whether teachers felt comfortable and confident with using the technology provided by the school district. Of the total respondents, 52% answered yes; 45% answered no; and 3% did not respond. The author assumed that a non-response indicated lack of confidence or discomfort. Graphical presentation is depicted in Figure 9.

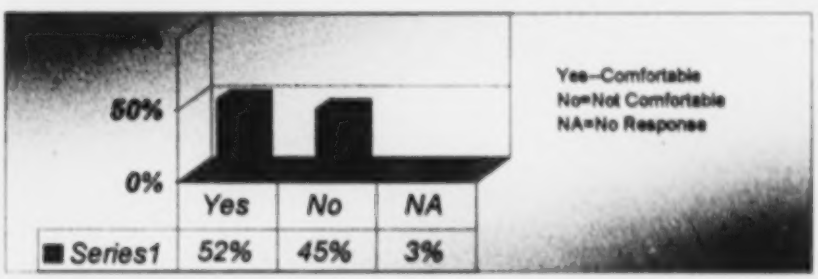

Figure 9. Faculty's Comfort With Technology

The compiled results of questions one through nine are depicted in Table 1 shown on the next page.

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Table 1

Number Surveys Returned of 100	**91**	**91%**
Question 1--Software Skills	**#**	**%**
Word Processing	73	80%
Database	21	23%
Spreadsheet	30	33%
Presentation Graphics	33	36%
Internet Navigation Software	41	45%
E-mail	37	41%
No Response	9	10%
Question 2--Internet Use	**#**	**%**
Less than 1/2 hour per day	15	16%
Never	36	40%
As Often As Possible	29	32%
Only If Required	7	8%
Not Applicable	4	4%
Question 3--How Internet Was Used	**#**	**%**
Pleasure	30	33%
Research and Reference	50	55%
Classroom Content Information	26	29%
Professional Development	30	33%
No Response	39	43%
Question 4--Internet Access	**#**	**%**
FIRN at School	32	35%
FIRN at Home	12	13%
Internet Service Provider	13	14%
Commercial Service Provider	5	5%
Not Applicable	40	44%
Question 5--Technology Incorporation		**%**
Yes	43	47%
No	36	40%
Not Applicable	11	12%
Question 6--E-Mail Use	**#**	**%**
Yes	46	51%
No	42	46%
Not Applicable	2	2%
Question 7--Search Engines Used	**#**	**%**
Yes	34	37%
No	41	45%
Not Applicable	15	16%
Question 8--CEU Course Interest	**#**	**%**
Yes	73	80%
No	16	18%
No Response	2	2%
Question 9--Technology Comfort	**#**	**%**
Yes	47	52%
No	41	45%
No Response	12	3%

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Question 10 asked the teachers to make personal comments or suggestions. This information could not be graphically presented and was used only for idea generation in preparation of the monthly distance education instruction, for faculty input and general informational purposes by the author. One teacher commented as follows: "I welcome any and all training that will help me become more proficient in the use of technology in relation to my content area." Another teacher commented as follows: "I would like to be able to search for interesting ways to use technology in my classroom and I believe the Internet is the way to do that." And finally, one teacher stated: "I have a problem attaching and opening files in my e-mail and I hope this course helps."

The school district spans a 35-mile radius with some schools on a long-distance telephone exchange. The outlying schools located in the long-distance telephone calling area have seen a dramatic increase in telecommunications toll charges since this change, which has placed a strain on the already low telecommunications budgets of those schools.

An interview conducted with MIS technicians in the1994-95 school year in order to enhance initial district technology training revealed that equipment/software was installed and no basic training was provided in most cases, with most teachers left to explore and use the equipment on their own.

Personal visits made by the author to district schools during the 1996-97 Project Child Career Day Program revealed by personal examination that only one-third of the classroom teachers visited had incorporated any form of technology into their curriculum. Further investigation by interviews with 26 participants enrolled in the 1996-97 spring semester district technology training classes revealed that only three had incorporated any form of technology other than basic drill and practice, simple word processing for the

purposes of report writing, CD-ROM encyclopedia, games, or Print Shop Graphics into their classroom situations.

A personal interview in September 1997 with the school district MIS Director revealed that only 50% of the teachers who were given e-mail addresses were utilizing this means for communication and no teachers had home pages on the school server, while some schools had just been placed on-line within the last two months.

An Interview with the school district Director of Teacher Training and a search of public records of CEUs awarded to teachers in the past three years revealed that there had been no significant increase in training offered for technology; and funds generally were not readily available as training was handled in-house among schools. Further search of public training records revealed that during the past 3 school years, only 4 of the 10 district schools had reported any type of documented inservice technology training. Of this reported technology training, all was provided by self-taught veteran teachers who simply volunteered to help their peers feel more comfortable with the technology located in their classrooms.

Teachers have found that the average student has access to some sort of technology at home or local business establishments for recreation and games, or at the local public library, making the students in their classrooms more comfortable with technology than they are. This high student comfort level is due in part to more exposure to its varied uses.

Causative Analysis

Numerous possible causes of the problem were identified by the author and are explained in the following paragraphs.

One possible cause identified was due to a shortage in area code exchanges within the state and the creation of a new national telephone area code exchange last year. This problem was identified through national and local news about the mandatory changes that went into effect in early spring of 1997 for the entire state. Further investigation led to the discovery that the author's county would have segments divided between the present area code and the newly created one, placing some remote district schools into a long-distance prefix, causing high toll charges when calling from school to school in these areas.

The result of this investigation revealed that, due to some schools being in a different area code, toll charges would be set at a higher rate for long distance during peak daytime school hours, directly and adversely affecting the county school district's already suffering telecommunications budget.

Another possible cause was due to the fact that some schools had only recently been wired to the Internet and e-mail, while other schools had been on-line for several years, thus providing a mixture of skill levels among the instructional staff and tension among those only recently placed on-line. This problem was identified through an interview conducted during the 1995-96 school year with the Director of Instruction for the school district which revealed that, due to funding efforts, the DTP was to be completed in five distinct phases encompassing five years, with schools closest to the "hub" or wiring center to be the first placed on-line. Further investigation revealed that those schools placed on-line within the last school year were the greatest in need of training, and, due to their geographical location within the school district, would also be greatly hindered by time and distance in receiving training.

The result of this investigation revealed that due to tight budget restraints and the time involved in getting to and from training, a more cost-effective means for training needed to be identified which would take into consideration all of these factors, as well as equipment and software currently available across the district.

Another identified cause was the fact that microcomputer systems were ordered and installed by the MIS office (or local supplier) at each teacher's work site, which turned into a tremendous task for the few technicians available, often leaving some teachers with no training or insufficient hands-on training. This problem was identified through a discussion with a MIS Technician during an interview in school year 1995-96, when it was determined that this process saved the school district time and money in the initial installation process when funds were very limited. Further investigation through interviews with district teachers enrolled in the 1995-96 spring district technology training course, instructed by the author, revealed that most of the teachers did not follow up with MIS for on-site hands-on training; and it was assumed that all was well.

The result of this investigation revealed that those teachers who did not receive any hands-on training became frustrated with their equipment, often relying on other teachers for technical assistance. The teachers were thereby less proficient and more hesitant to use the equipment, often giving up or going back to older less efficient manual methods.

Another possible cause of the problem was due to the fact that when the school district began the initial phase of the technology upgrades, a local Internet Service Provider (ISP) was chosen to work in partnership with the district; however, months later, problems occurred with this provider, which in turn caused problems with on-line access

throughout the school district. This problem was identified from within the local business community when word spread that the ISP was having severe financial problems and, in fact, did take bankruptcy and closed its doors to business, leaving the school district without Internet service for a short period of time. Further investigation through the school district MIS office revealed that the office had to research other means of acquiring affordable Internet service. After a short period of time, the school began using a state-operated free-of-charge network connection to e-mail and the Internet.

The result of this investigation revealed that the free on-line connection service being provided, coupled with the school district having to finance and install its own server and modems, had caused problems in securing access to the Internet at peak usage times due to heavy traffic with only a few connections available, as well as technical expertise and personnel to correct and handle the situation.

Another possible cause of the problem was identified by the fact that instructional employees in early spring semester of the 1994-95 school year were given new state mandates for incorporation of technology into their classroom curriculum, as a direct result of President Clinton's Goals 2000 Educate America Act. With these mandates came the pressure for teachers to learn skills that were considered new and different and often very frustrating, with very little or no training.

This problem was identified through discussions with the Fiscal Officer at the author's home-based school during that year, which revealed that each school site was responsible for their employees' professional development as well as technology training; however very few funds were provided for this activity. Further investigation during the next school year in a telephone call to the Director of Teacher Training in the school

district revealed that many schools had not had any formal technology training, as few schools had "resident experts" willing to take the time and effort to provide the training, with no incentives offered for doing so.

It can be concluded as a result of these investigations that due to lack of formal technology training because of budget restraints and district training policies, and lack of on-site technical expertise at individual school sites, teachers were behind in incorporation of these skills into their teaching areas and were feeling pressured to now learn new skills on their own to meet state mandates, with little time to accomplish this huge task and very few incentives offered for doing so.

Another possible cause of the problem of discomfort with technology among the teachers was due to the fact that since 1994 software upgrades have increased the greatest percentage since the invention of the microcomputer, with school district software being upgraded as much as three times within that timeframe. This problem was identified through personal first hand knowledge from being in the software applications teaching area, where it is often hard for the author to keep up with equipment and software upgrades to keep her own skills current with industry standards. Further investigation by observation of equipment in the school district revealed that as new software was loaded into district employees' machines (such as Windows 95 and the upgrade to Microsoft Office Suite from Versions 4.3 to 95 and then to 97), this increased the frustration as teachers tried to adapt to the new upgrades on their own.

The result of this investigation revealed that some teachers simply gave up, while others struggled with the new technology but continued to use the same methods when it came to classroom teaching, most without incorporating technology into their curriculums

and most with the feeling that technology's only valid use was in a computer lab setting rather than as being a practical application in everyday real-life situations.

Another identified cause lies in the fact that in the past five years, due to technological advancements in components and a drop in price, the average home now contains a microcomputer system and children at younger ages are being introduced to various forms of technology through games and recreation without fear of the equipment, thus leaving some over-worked teachers less adept in the use of the technology than their students. This problem was identified during interviews with the participants in the spring 1996-97 technology training class conducted by the author, where it was revealed by many veteran teachers that their pupils were more adept at technology than they were, causing a lack of confidence with using it. Further investigation of this issue revealed that these teachers were at times relying on their pupils to train them, which caused an even greater lack of confidence.

The result of this investigation showed a general fear that had engulfed many older teachers and even some newer ones struggling with the numerous tasks of teaching, with little or no time set aside during the school day for skills upgrading, thereby instilling a mental block in regard to technology.

Another possible cause of the problem was in the fact that the State Department of Education currently requires that all teachers accumulate 25 CEUs per school year toward renewal of their teaching licenses. Generally CEU courses are offered in specific curriculum and content areas, with there being few specialized technology training courses offered in the school district which offer CEUs. This problem was identified through a search of public records kept by the school district administrative office listing the types of

CEUs offered by each school. This search by the author revealed that in the past three school years there has not been a significant increase in technology training over past years.

Further investigation through information obtained in an interview in the Fall of 1997-98 school year with the district Director of Teacher Training revealed that all professional development by CEU is handled in-house at each school where the decision is made locally as to what type of training to be offered based upon school needs, availability of personnel to conduct the training on-site, and funds available to do so.

As a result of this local training policy, schools with the least amount of technology available and those only having recently been wired to the Internet had the least amount of CEUs offered to their staff for technology training, were the greatest in need of training, and felt the most behind in their skills.

Relationship of the Problem to the Literature

During the author's review of the literature, the topic areas researched providing insight into supportive evidence and possible causes of the problem were as follows: faculty training, distance education, distance education training, Internet training, e-mail usage, web-based training, on-line training, technology training, technology infusion, and teacher professional development.

The literature suggests that a common problem exists among many of today's educators in trying to shift their focus of the role of the teacher in today's electronic classroom from that of deliverer of knowledge to one of information guide and facilitator. All literature points to this new role, contrasting the teacher of yesterday as the repository of all knowledge, with the teacher of today being the mentor and guide who facilitates the

student in navigation through information made available by technology and interactive communications. The National Academy of Sciences during the May 1993 convocation entitled "Reinventing Schools: The Technology is Now!" stressed that the new model of today's school involves students, through peer-tutor roles, assuming many of the functions previously reserved only for teachers (National Academy of Sciences, 1996).

This new educational paradigm involves change. As Fullan (1990) stated, change is a journey and not a blueprint. The development of new technological skills, behaviors, and beliefs, while being a complex process, must embrace the problems inherent in change. One of the major obstacles today's teachers must overcome is the fear that the challenge to change is a threat rather than an opportunity for personal growth.

Brennan (1991) found through observation of a central computer lab program using computer-based learning activity periods apart from the regular classroom, that students were utilizing the equipment as an addition to their regular classwork, without teacher supervision or interaction, and were thus not experiencing a correlation between the lab lessons and their classwork. Evidence revealed through investigation of this study indicated that during a typical schedule providing each student with two 30-minute sessions at the computer per week, only 8 of 27 teachers provided direct input, prescription, or suggestion as to the correlation between the computer-based activities and the student's classroom learning experiences. A possible cause was concluded through a review of yearly teacher performance evaluations indicating that of 23 returning teachers, 6 self-evaluated personal effectiveness with respect to general utilization of computers as only satisfactory and 7 rated themselves as needing improvement when responding to the

standard school-wide evaluation instrument on a scale of ratings including outstanding, above average, satisfactory, needs improvement, and unacceptable.

Brennan (1991) also found through her study that teachers were neither confident with their skills nor possessive of positive attitudes toward acceptance of the role of computers within the total classroom context. Evidence presented by Brennan through writer-prepared and teacher-completed questionnaires revealed the following: With regard to levels of confidence or familiarity with available software, the mean rate of response was rated as being somewhat insecure/requiring assistance, while that for operational procedures was rated as being unsure or unfamiliar/unable to work independently. Possible causes listed by Brennan related to attitude in general toward computer applications with only 13 of the 27 teachers indicating a positive response toward acceptance and integration of computers, or the role computers play in educational contexts, as determined by the same survey.

Brennan (1991) further found that classroom teachers had not been provided with the proper and necessary staff development and inservice technology training to promote the active and effective implementation and integration of computer-based instruction into their everyday classroom situations. Evidence presented by Brennan was revealed in the fact that teachers were very hesitant to begin implementation of any type of technological innovation. One possible cause for this lack of training was revealed through Brennan's study of the long-range planning process of the school, which did not solicit the active involvement of classroom teachers through establishment of a consensus for change at the instructional level.

Burmeister (1993) found that teachers in her school district used computers because of their availability in the classrooms in her district; however, the majority of the use within the classroom was for routine drill and practice exercises or simple word processing functions. Burmeister presented evidence that even though telecommunication software and hardware was readily available and teachers had an on-line account already set up, they were not making effective use of this technology.

In Burmeister's (1993) study, six causes for the problem were presented that included education and experience, cost factors, lack of "real people" connections, unfamiliarity with the equipment capabilities, information access, and on-line services' marketing strategies.

Albaugh (1997) found that some teachers engendered a cautious attitude toward technology and harbored a cultural resistance to change. Evidence presented by Albaugh was related to the significant influx of computer games and the public perception of video as an entertainment medium. One possible cause related by Albaugh was that the computer could be heralded as not being a legitimate educational tool for classroom use due to the public perception of microcomputer technology as being "fun and games" to many.

Thurston and Sebastian (1996) found that due to isolation factors involved in rural settings, providing up-to-date and current information and in-service education can be a hindrance to educational personnel. These authors found a documented lack of training in rural areas where specialized teachers were not available to lead inservice training. These authors also found there to be a documented lack of special preparation for teachers who

serve in rural areas with the cause being the expense involved in bringing the expert to the rural setting when considering travel time and distance.

Black (1991) found that because her school district had not addressed the general needs of either the staff or students for computer technology, the first step toward meeting the needs of the students was to provide general computer literacy training for all teachers. Evidence in Black's study was drawn from the extreme apprehension of the general population of the faculty towards using computers and in the lack of technology planning and analysis at the district level. Possible causes revealed in Black's study were poor teacher attitudes toward technology, constraints that were imposed upon classroom teachers to begin to use computer technology in their teaching, and lack of hands-on experiences with the technology.

Jones, Boyd, Olson, and Duncan (1996) found that traditional methods of teaching in the theatrical education realm were not accomplishing the department's goals in a thorough manner. Evidence revealed that while technology had been used as a means of tapping into resources through the use of the World Wide Web and e-mail, it had never been used as the prime vehicle for dispersing knowledge and conducting research for a semester-long course in the department of theatre at the authors' school. One possible cause lies in the fact that theatre teachers nor students, on the average, are technology oriented nor are they interested in technology in general; thus, the distance education avenue for teaching and learning had not been explored previous to this study.

Seagren and Watwood (1996) found that even with today's colleges entering the information age, in higher education the established culture still emphasizes the college professor as the information-giver, when today's society looks for high caliber, expert-

level, collaborative learning. These authors found evidence supporting the fact that conservative and slow-to-change higher education institutions typically balk at this change. According to this study, contributing causes have come from the social, economic and political environments demanding upon public education an increase in its productivity, yet decreasing dollars for education, thereby forcing institutions to deal with efficiency and effectiveness issues while at the same time not lowering quality of instruction.

Wyatt (1990), while believing that computer technology would increase productivity in the classroom as well as enhance professional development of the teachers in her school, knew that simply providing teacher training would not increase the amount of time computers were used in the classroom. Wyatt found evidence that there was a general lack of use, planning for future use, and enthusiasm over incorporating technology into the classrooms among her peers when teachers were asked to complete an attitude survey as part of her research. Possible causes of this general lack of technology use were found to exist in the attitudes of teachers who felt that there was little time to incorporate technology, lack of on-site technical support, and general feelings of discomfort with the equipment.

Mende (1996a) found online delivery to involve a mastery of up-to-date computer skills and new social conventions if the system is to be successful. This author found evidence existed that distance delivery instructors must make a commitment to learner support and structure in the delivery environment if success is to be substantial. One cause of failure found was the fact that proper instruction before use in new delivery systems of e-mail, listservs, and computer-conferencing was essential--they must be taught effectively before they can be used effectively.

Arant (1996) examined the use of online computer resources in journalism and mass communication programs to find that with distance education programs in most colleges and universities growing at a rapid pace, delivery of journalism courses via this means had not increased significantly. Evidence was provided in a 1996 survey of member schools of the Associations of Schools of Journalism and Mass Communication and revealed that although most schools have online resources, only about 60 percent of the program administrators reported that online resources had substantially changed how journalism and mass communication were taught. Some possible causes revealed by Arant's further study were that with almost 97 percent of the faculty having computers in their offices, many were skeptical about the impact of new technology into the curriculum and worried about their impact on information manipulation, personal privacy and the potential for control.

Novek (1996) studied the concept that while computers have highly automated many tasks and professions, there is a fear among educators that an educational downsizing may be the ultimate effect. Evidence presented by this author's study was revealed in a survey disseminated to the faculty at the small university where she works and posed thought-provoking questions that emitted written concerns from faculty who were technologically literate to those who were not. Causes of the concerns that computers may overtake the role of the teacher revealed in Novek's survey stemmed from the idea that a "dehumanization and alienation" had taken effect in a "computer-dominated learning environment workplace" (p. 1).

McArthur and Lewis (1996) found that as resources dwindle, there is more of a focus on using information technology to improve productivity by reducing the time,

money, and teaching resources needed to help students learn. Evidence presented by these authors reveal that distance learning applications have brought impressive savings in cost to educational institutions and suggest that the Web may be the greatest cost-effective means of delivering courses in the future. One possible cause was due to the fact that Internet and Web tools have and will continue to increase in functionality while at the same time drop in price, thereby decreasing the amount of faculty labor needed to manage educational programs.

Barron and Ivers (1996) found through their study that the education realm should take advantage of the distance, multiple resources, and speed that telecommunications offers, while deliverers of these technologies should require skills to synthesize, analyze, and evaluate the information received, rather than aim at mere fact collection. Evidence revealed that the majority of teachers questioned only required research skills as narrow as a CD-ROM encyclopedia or database. A possible cause suggested from this study was due to this type information being self-contained and the fact that teachers would not have to worry about students' receiving inappropriate information on the Internet if they wandered off the research path.

Adams (1996) recognized that distance education programs for k-12 and post-secondary education have grown in importance as the Internet has become a valuable research tool; however, with such a great wealth of information available, often it becomes difficult for typical students to organize their research into meaningful projects within a suitable timeframe. Evidence exists to substantiate that with a growing number of training materials now available, students as well as educators find it time consuming to identify

and locate electronic training resources. One of the major causes of the information overload is the now widely accepted nature of the Internet as a research tool.

Imel's (1996) study on distance education trends and issues substantiated the fact that the rapid development and decreasing costs of communications technology, which includes the microcomputer, the Internet, and the World Wide Web, have expanded and affected the delivery of education to a large degree. Evidence presented by this author included recent changes in distance education as a result of new technology which is needed to ensure learner access to the information superhighway, and the need for more training for teachers. One possible cause was due to the concern in the education community to begin to train teachers to adapt to distance education's new emphasis on learner-centeredness and interaction rather than their simply using tried and true teaching techniques of yesteryear to deliver instruction over this fast-paced medium.

In summary, the paradigm shift in education, proper teacher training, peer interaction, time for professional and technological development, and adoption of a new teaching/learning role in today's electronic classroom will serve to enhance and improve the quality of instruction, increase the general efficiency of school administration and faculty, and the overall educational experiences of today's students. One of the best methods for meeting this tremendous task is through distance learning and the Internet, which have become readily available in school districts across America in the past five years.

Chapter III: Anticipated Outcomes and Evaluation Instruments

Goals and Expectations

The main purpose of the author's practicum was training faculty to enhance incorporation of new technology into classroom teaching and learning situations by becoming comfortable and efficient with the equipment and software presently available for their use, while providing quality professional development experiences earning continuing education units through a distance delivery, any time/any place learning mechanism.

Expected Outcomes

The following outcomes were projected for this practicum experience and are described in performance terms in the following paragraphs.

Outcome 1. Participants will use the Windows 95 operating system to boot their computers and move fluidly from one application of Microsoft Office Suite to another. To measure the outcome, a competency test was administered after hands-on instruction and practice in the eight-hour initial training phase of the practicum. The standard of performance that was accepted after completion of the training was based upon the participants' ability to successfully boot their computers and properly open and close all four applications of Microsoft Office Suite with 100% accuracy, without an error message, while the instructor observed.

Outcome 2. Participants will use Microsoft Word 97 for simple word processing applications such as letters and reports. To measure the outcome, a competency test was administered after hands-on instruction and practice in the eight-hour initial training phase of the practicum. The standard of performance that was accepted after completion of the

training was based upon the participants' ability to create, save, revise, and print a simple one-page letter to their instructor on a topic of their choice, with 100% accuracy, while the instructor observed.

Outcome 3. Participants will use the mouse to perform simple cut and paste procedures from one software application to another. To measure the outcome, a competency test was administered after the hands-on instruction and practice in the initial eight-hour training phase of the practicum. The standard of performance that was accepted after completion of the initial eight-hour training phase was based upon the participants' ability to cut and paste a block of information from a letter they produced earlier and saved on disk, into a new document on their microcomputer screen, with 100% accuracy, while the instructor observed.

Outcome 4. Participants will use Microsoft Excel 97 for simple spreadsheet applications in grade computation. To measure the outcome, a competency test was administered after the hands-on instruction and practice in the initial eight-hour training phase of the practicum. The standard of performance that was accepted after completion of the training was based upon the participants' ability to create, save, revise, and print a simple grade reporting spreadsheet using their own student records on three recently-administered tests, with 100% accuracy, while the instructor observed.

Outcome 5. Participants will use Microsoft Access 97 for simple database applications for classroom records management. To measure the outcome, a competency test was administered after the hands-on instruction and practice in the initial eight-hour training phase of the practicum. The standard of performance that was accepted after completion of the training was based upon the participants' ability to create, save, revise,

and print a simple database of one class roster listing each student's name, address, parents' names, phone number, and grade level, with 100% accuracy, while the instructor observed.

Outcome 6. Participants will use Netscape Page Composer software to create a simple personal web page to be included in the faculty home pages on the school district Internet site. To measure the outcome, after hands-on instruction and practice during a half-day training phase, each participant will create a home page with an embedded photograph and one animated graphic captured from the Internet. The standard of performance that was accepted after completion of the training was based upon the participants' ability to create, embed a graphic, and embed a hotlink into a personal home page with 100% accuracy, while the instructor observed.

Outcome 7. Participants will use the printed handout materials and the on-line help facility built into the practicum web site and accessed through the school Internet server, together as resources for solving typical problems encountered while using the software installed on their computers. To measure the outcome, during the initial training phase, each participant will be guided through the printed handbook and help facility as typical questions are posed and addressed by the author-instructor. The standard of performance that was accepted after completion of the training was based upon the participants' success in use of the help facility and/or handouts for troubleshooting a minor problem situation posed by the instructor during the initial eight-hour phase of training, with 100% accuracy, while the instructor observed.

Outcome 8. Participants will use Netscape Navigator software to research topic areas from their own teaching field, using Internet search engines. To measure the

outcome, after hands-on instruction and practice in the initial phase of the training, the participant will be able to access the distance education site and use the on-line help facility and/or printed handouts to complete a series of three-hour on-demand monthly instructional modules using Internet search engines and research techniques. The standard of performance that was accepted after completion of the training was based upon the participants' successful completion of each monthly instructional module (February through June), based on current research from the Internet and documented by providing Uniform Resource Locators (URLs) of sites accessed, and e-mailed to the instructor monthly, with 100% accuracy.

Outcome 9. Participants will incorporate at least one simple form of technology into their teaching curriculum each month during the distance delivery phase of training. To measure the outcome, each month during the monthly instructional module distance delivery phase of training, each participant will report on the type of technology, the area incorporated and the results achieved. The standard of performance that was accepted after the training was measured by the participants' ability to incorporate at least one simple form of technology into their classroom curriculum each month during the months of February through May, with 100% accuracy, as observed by written evaluation included in the "Sound Off Section" of the distance education module.

Outcome 10. Participants will use Netscape Mail for communication purposes in daily correspondence and in attaching documents to correspondence. To measure the outcome, after instruction and practice in the initial phase of training, the participants were able to successfully compose an e-mail message to their instructor, attach a file created from a Netscape copy/paste operation, and send the file to their instructor with a copy

sent to themselves. The standard of performance that was accepted after completion of the training was the successful use of e-mail for delivery of each month's instructional module to the instructor, with 100% accuracy.

Outcome 11. Participants will collaborate and exchange ideas with their peers in an instructor-monitored web discussion board on topics pertaining to incorporation of technology into the curriculum, professional development and current trends in education. To measure the outcome, after instruction on the general directions for use of the web board during the initial phase of training, the participants were able to successfully post a reply to the instructor's initial posting on the board. The standard of performance that was accepted after completion of the training was the participants' ability to post at least one reply to the instructor's posting and to post one topic of their choice during the monthly distance education instruction phase of the practicum, with 100% accuracy, as observed by the instructor's viewing the discussion board postings.

Outcome 12. Participants will be able to successfully research web sites and glean current information that can be used for professional development in their particular teaching fields. To measure the outcome, during each monthly instructional module at least one question was posed that pertains to professional development issues in education, to which the participants successfully responded. The standard of performance that was accepted after completion of this training phase was the participants' heightened awareness of current educational issues through their ability to report on at least one topic of professional development posed in the monthly instructional modules during the distance delivery training phase, with 100% accuracy, as the instructor observed the e-mailed lesson.

Measurement of Outcomes

The author-instructor decided to use the post-test mechanism to measure and analyze each of the outcomes listed above, as performance or competency-based evaluation has proven to be the best means of determining student success in the area of skills acquisition. All post-tests were author-created for each particular type of competency expected and were performance-based check-off type instruments with a participant direction/instruction sheet. An example is provided in Appendix D of this report. Each instrument was fashioned in a two-column "yes" or "no" format. In other words, the participants were either able to perform the competency or not able to perform the competency. Each post-test was administered individually after the hands-on training and practice session. The participant was allowed a specific amount of time to complete the tasks while the author-instructor observed. The amount of time varied depending upon which outcome was being tested. The direction sheet for each competency being measured clearly stated the amount of time the test would entail and the scoring mechanism used. A separate post-test was administered for each of the following areas: Mouse skills and Windows 95, Word 97, Excel 97, Netscape Navigator search techniques, Netscape Page Composer home page creation techniques, and Netscape E-mail. A scoring mechanism was built into each test on a 100-point scale, whereby each competency performed was equally weighted and a final score derived. Upon completion of the test, the score was computed and the participant given feedback.

The author used the methods described in the following paragraphs to analyze and report the results of this practicum.

Outcomes 1, 2, 3 and 7. During the eight-hour workshop initial phase of the training, participants were post-tested on a competency-based measure by the instructor's individual examination of each participant's performance on the following items, with a roster of all participating students and a competency check-off sheet kept in each individual participant's file, as evidence of completion of the tasks: (a) Booting the microcomputer without an error message, loading the Windows 95 operating system, powering down the system; and opening and closing all four applications of the Microsoft Office Suite software; (b) accessing an on-line connection to the Internet and opening, closing, minimizing and maximizing Netscape Navigator software; (c) using the printed handouts and on-line version of the instructor-created help facility; (d) using the mouse to cut and paste information from one application to another; and (e) at least one reply to a topic posted on the distance education web board by the author-instructor.

Outcomes 4, 5, and 10. During the eight-hour initial phase of the training, participants were post-tested on a competency-based measure by producing hard copy printed matter from each of the following areas of instruction, with the author-instructor utilizing a competency check-off sheet and a file of the printed outcomes kept as evidence of completion of the tasks: (a) a simple one-page letter to the instructor created in Microsoft Word 97; (b) a simple grade report spreadsheet taken from an actual class roster, created in Microsoft Excel 97; (c) a simple class roster of each student's name, address, parents' names, phone number, and grade level, created in Microsoft Access 97; and (d) an e-mail message created in Netscape Mail with a document from their student disk attached and sent to the instructor's school e-mail address.

Outcomes 6, 9, 11 and 12. During a four-hour planning day training phase, participants were post-tested on a competency-based measure by the instructor's individual examination of each participant's performance on the following items, with a roster of all participating students and a competency check-off sheet kept as evidence of completion of the tasks: (a) opening, minimizing, maximizing, and closing Netscape Page Composer software; (b) accessing the school district web page; (c) accessing the distance education site linked from the school district web page; (d) bookmarking URLs for future reference; (e) accessing the links on the distance education site, such as news, help facility, teacher resources and staff home pages; and (f) using the Internet search engines provided on the teacher resources site for securing educational information on professional development and incorporation of technology into the content areas.

Outcome 8. During each of the monthly instructional modules completed through distance education, the participants received a percentage grade based on a 100-point scale for each lesson completed during the months of February through June, with the instructor keeping a grade spreadsheet of each participant's numerical grade and a hard copy file of the participant's printed lessons. Modules included web page creation, technology current awareness, professional development issues, new teacher roles, and the changing nature of teaching and learning.

Additional Evaluation Required. Another result of the practicum experience was measured in the participants' receiving continuing education units (CEUs), with the author-instructor responsible for awarding and reporting to the school district administrative office the total number of CEUs each participant received for professional development. This information was recorded on a spreadsheet during and after the

practicum experience and a copy of the form sent to the district office kept in the participant's file. According to state guidelines, one CEU is offered for each hour of training the participants are engaged in. All participants received an official record of their hours completed and points received. The Director of Teacher Training for the school district received the original copy of the report.

Chapter IV: Solution Strategy

Discussion and Evaluation of Solutions

Topic areas researched by the author for possible solution strategies were as follows: faculty training, distance education, distance education training, Internet training, e-mail usage, web-based training, on-line training, technology training, technology infusion, and teacher professional development.

In early 1994, President Clinton's Goals 2000 Educate America Act (Goals 2000 Educate America Act, 1994) made the most profound impact on education than any legislation ever before introduced in America. By and through this important act, planning grants were created for each state to integrate technology into its curriculum. The President's educational technology initiative broadly proclaimed four pillars of challenge to school districts across America--modern computers and learning devices accessible to every student; classrooms connected to one another and the outside world; engaging educational software as an integral part of the school curriculum; and teachers ready to use and teach with that technology.

With the Goals 2000 Act came the tremendous task of schools and education to begin a new reform process, not only in bringing the physical aspects of the technology to the student, but also in training teachers in how to use and assimilate the new technology into their classroom and daily lesson plans.

The author gleaned numerous possible solution strategies from the literature areas researched, which are described in the following paragraphs.

Thurston and Sebastian (1996) found that the delivery of training and information via distance education, whether by live interactive means or multimedia programs at local

sites, has proven to be efficient and effective for educating rural personnel. From the perspective of the author's workplace this solution strategy was ideal due to the rural nature of the school district and the span of distance between some schools, when also taking into consideration time and cost factors involved in traveling to and from training sites for either the student or the instructor. The author's decision was to use this strategy for the on-going monthly instructional modules for continuing education credit and to develop the distance education site as a meeting place for daily peer interaction through the web board and the use of the school district news page included in the practicum web site.

Knight and Albaugh (1997) found that by providing intensive software training to teachers they could serve as mentors for using the new technology at their school sites. From the perspective of the author's workplace, this solution strategy was a viable option as teachers with a higher degree of adaptability to technology were able to serve as mentors at their school site for teachers who seemed less comfortable with technology. The author's decision was to incorporate this strategy into the practicum by a reward system whereby participants kept a log of the mentorship activities performed and reported on this at the final training day ending session. CEUs were awarded to these participants for incentive.

Barnes (1997) conducted a study whereby participants were grouped in teaching teams with a university faculty member--each team was loaned devices such as laptop computers with projection equipment, video laser disk players and CD-ROMs. The participants were instructed on how to infuse technology into their curriculum and they produced a portfolio of their accomplishments and gave a presentation of those

accomplishments at the end of the one-year study. From the author's workplace perspective, this approach was used as a form of collaboration among teachers at each district school site whereby each school created a portfolio of their accomplishments and presented and reported on their accomplishments at the end of the eight-month practicum phase. The author incorporated this excellent idea into the practicum experience and reports were made and portfolios presented during the final training wrap-up workshop.

King (1995) developed a distance delivery program whose target audience included graduate level employed teachers enrolled in institutes of higher education wishing to improve their classroom instruction through literacy of technology, multimedia, current and emerging computer-based instructional technologies, instructional software, distance learning, and the Internet. From a workplace perspective, the author feels this solution strategy worked extremely well. The key to finding interesting and practical new methods of course delivery is through helping teachers and students work together in assimilation of new information and technology. Providing teaching staff with ideas for finding new and current teaching methods for emerging technologies was the main focus of the author's practicum. This was incorporated on a monthly basis as the participants completed the distance delivery instructional modules and reported their technology curriculum incorporation efforts for that particular month.

Kerka (1996) found distance education delivery to have the following advantages: time and place flexibility; global audience potential, freedom from compatibility concerns in relation to computer equipment and operating systems, rapid development time; ease of updating content; and lower development and operating costs. From the author's workplace perspective, the advantages reported by Kerka's research were a key factor in

making teacher professional development and technology instruction available to the entire school district. This solution strategy was very appropriate for the author's work setting, especially in relation to the factor of low operating and development costs.

Mende (1996b) suggested in his study that the instructor must make a commitment to daily reading of e-mail and prompt response to on-line bulletin board posts for a distance delivery program to be the most effective for the students. The author believes that from a workplace perspective this research was very beneficial, especially from the standpoint of commitment to short e-mail response time during the instructional modules when teachers needed immediate feedback on their lesson submissions or help through the on-line help facility built into the teacher training web site. This solution strategy seemed very appropriate for the author's work setting and a commitment was made to the participants from the very start of instruction. The author-instructor was able to keep e-mail lines of communication open during the entire school day and, with an audible notification of e-mail delivery on her workstation office microcomputer, was able to sometimes immediately provide feedback and response or technical assistance.

David (1991) found that technology does not simplify teaching and introducing technology into the curriculum increases the complexity of teacher's jobs because it makes more complex and more effective approaches to teaching possible. Even under the best of circumstances and within the context of the best training and support, the teachers' jobs become harder because they are not only learning how to use the technology but at the same time how to teach differently. Teachers also have to learn how to relate differently to their students and must assume new roles as technicians, researchers, facilitators, mentors, learners, coaches, and guides. The ability to access information will be more important

than having the information stored in one's memory. The author believes that from a workplace perspective, this study was most valuable as every teacher's role in the district has and will change as new technology is incorporated into the curriculum.

McKenzie (1991) found that staff development must be experience-based, with the learning resulting from doing and exploring rather than from passively listening. Substantial shifts must take place in perspective and behavior through active involvement, role-playing and hands-on experience. McKenzie advocated that staff developers should substantially involve teachers in planning the types of courses used for staff development by placing teachers on planning committees and making greater use of surveys and questionnaires in planning professional development activities. From the author's workplace perspective, this study was effectively utilized, as the author made use of the valuable information contained in the needs assessment questionnaire to plan and prepare instruction for the district schoolteachers. The distance education monthly instructional modules also contained a feedback mechanism where teachers had a chance to present their likes and dislikes about the instruction presented in order to improve each module on an on-going basis, as the author-instructor incorporated their suggestions during the next monthly module.

McClure and Lopata (1996), in their informative manual on networking strategy, stress that all hardware and software resources and training programs offered must regularly be updated and meet the current academic and administrative program needs of its users to be successful. This solution strategy is one that should be a keynote to every workplace that trains teachers, as they are the vital link to keeping the students current in their skills and knowledge; therefore, it was of major importance in the author's practicum

to keep the district teachers involved in this training knowledgeable about current software and hardware trends. The solution strategy was of major importance in the author's practicum as one of the goals was to meet state mandated technology requirements.

Terrell (1996) addressed the need for distance education and stressed that an attempt needs to be made to move from a totally teacher-centered instructional paradigm to a student-centered learning paradigm that fosters learning efficiency and addresses such things as personality, academic motivation and learning style. From the perspective of the author's workplace, this concept and its underlying strategy was very useful in that for the most part, the teachers who used the distance education training site were reluctant to incorporate Internet technology into their curriculum, with one of the reasons being that they felt a loss of control over the student when given the freedom of the Internet. The author used this strategy in the practicum experience during one of the monthly instructional modules whereby research was conducted on the advantages of a student-centered learning environment and Internet integration, so that after completion of the lesson, district teachers felt more comfortable with the technology and its use by their students.

Suiter's (1995) research brought out key ideas about the teaching methods one should employ when teaching adult learners the use of the Internet and e-mail in a classroom situation. From the author's workplace perspective, the strategies employed in this research were used to teach the basic microcomputer skills session through lecture/demo, using real-life illustrations and examples provided by the participants themselves from their own class rosters and files, followed by a hands-on session where

the teachers explore the learning on their own. The author made use of this research strategy, as it seemed to best suit the target audience and the classroom setup during the practicum experience.

Hufman (1995) had excellent points to suggest in her study of distance education delivery by suggesting that the interpersonal relationship between student and teacher can be enhanced by giving the student more feedback than usual on their assignments, by friendly e-mail responses, and by grading assignments within three days. From the author's workplace perspective, the solutions brought out by this author were excellent and very rewarding, especially the tips given for evaluating e-mailed assignments, such as use of appropriate sources, documentation of sources used, and application to real-life situations. The author employed a majority of the strategies brought out by this research.

Bisman (1996) stressed the powerful potential of the Internet as a communications tool providing a means of achieving a global networking and as a means of enhancing student or student/teacher collaboration. In the author's workplace, due to its rural nature, ease of communication and collaboration was of prime importance. The author enhanced the monthly instructional modules with instruction on how the Internet and electronic mail can be used for collaboration, thereby using this research strategy.

Mizell (1994) reported on the importance of multimedia in distance education and its effect on the higher order thinking skills needed to search for solutions and answers. From the author's workplace perspective, Mizell's concepts were well utilized during the instructional modules when the participants were asked to research the Internet for strategies to incorporate technology into their classroom teaching/learning situations. These excellent strategies were used by the author during the practicum's monthly

instructional modules phase, as well as incorporated into the teaching strategies that the participants used in their classrooms on a daily basis.

Lapenta and Lutz (1996) discussed various networking issues and strategies undertaken in a small rural community college and the solutions that they used by summing up their work with a mission that included being able to empower people to transform the information superhighway into a knowledge superhighway. From the perspective of the author's workplace, the strategies and solutions brought out by these authors were utilized as the participants in the practicum project begin to see the Internet as not only a valuable research tool but also a valuable knowledge base to themselves and their students. The author made valuable use of this research fully in all phases of the practicum experience.

Burmeister (1993), during implementation of her practicum, developed an e-mail communication system and a local bulletin board service for use in her school district and introduced its use by producing a telecommunications booklet, which included a glossary defining the vocabulary and the procedures related to both systems. From the author's workplace perspective, this procedure was well utilized with the on-line handbook built into the practicum web site, and a link to the extensive glossary of telecommunications terms also built into the practicum web site. The author made use of this solution strategy in all phases of the practicum by these methods.

Black's (1991) practicum combined many techniques for a very successful solution strategy, including hands-on training in a programming language, a training package which included a helpful glossary, hardware requirements and suggestions, software comparisons, and instruction in teacher productivity software such as electronic

gradebooks, databases, and word processing programs. The author's workplace perspective blended favorably with all of Black's techniques during the entire practicum phase as teacher productivity tools and general technology definitions were a starting point for the instruction, so that all participants had an equal knowledge base and uniform skills. The author made use of many strategies incorporated by this author during all phases of the practicum experience.

Wyatt (1990) incorporated such strategies as computer games, hands-on training within the teacher's classroom for reinforcement, expert resource assistance to increase computer usage, and specialized laboratory sessions to help overcome anxiety and poor attitudes toward computer use in her school throughout the implementation phase of her practicum. As many teachers in the author's school work setting had poor attitudes about incorporation of technology in general and admitted that they could not get the help needed to overcome technical problems, many of Wyatt's strategies had a tremendous impact on the success of the author's practicum experience. The author made use of several of the solutions that were successful for Black during all phases of the practicum experience.

Lever (1992), during her practicum experience, developed a training program for faculty at her school for increasing the utilization of technology, increasing the awareness of technology applications, and increasing faculty technology literacy through a series of workshops designed after careful needs assessment. From the author's workplace perspective, these strategies were the focus of the practicum experience as a sound awareness began with a careful needs assessment. The author employed most of the strategies suggested by Lever's study during this practicum experience.

Brennan (1991), during her practicum experience, developed a training manual which focused on practical information coupled with hands-on applications of newly acquired skills. This author developed training sessions that included teaching and learning with general microcomputer training, use of selected software, development and improvements in computer technology, use of higher-order thinking skills, creative problem solving with technology, and using computers for research. From the author's workplace perspective, Brennan's research and solution strategies, especially those of correlating software with classroom curricula and integration of microcomputer technology, were utilized fully during all phases of the practicum experience as these are many of the topics that needed to be addressed among most teachers in the school district. The author made considerable use of Brennan's solution strategies and findings during this practicum experience.

Description of Selected Solutions

From reviewing the literature and capitalizing on past educational opportunities and experiences, the author generated numerous ideas that created tremendous advantages during the practicum experience. Some of these ideas are discussed in the following paragraphs.

Opportunities provided through using the information superhighway will create changes in the teacher/learner and learner/subject matter interactions of tomorrow's classrooms, whereby the teacher becomes the facilitator of learning rather than a dispenser of knowledge and the learner becomes empowered and responsible for their own learning (Chambers, 1994). Teachers in the school district must grasp this concept and make changes in the way they present materials to their students so that their classrooms

become a "community of learning" where students take a certain amount of responsibility for their own successes. This concept was put to full use as the participants explored the information superhighway for themselves during the monthly instructional modules to find new and creative ways of introducing lessons in their classrooms and then reported on the ways they accomplished this each month.

As more and more public schools are linked to the Internet, students are learning to explore the world of online information services, thereby making teacher education through professional development activities and technological literacy the heart of today's k-12 school reform (Brown, 1996). Teacher development and professional improvement is more important today than it ever has been, due to fast- paced technological developments and state mandated goals for improvement; therefore, the author's school district has made it a top priority area for improvement. The main goal of this practicum was incorporation of technology into the classroom through teacher professional development.

Emphasis in the classroom continues to shift from teaching to learning, while the teacher's role moves from instructor to facilitator; therefore, with educators willing to adapt to this new technology, their success will depend on easy accessibility to equipment, technical training opportunities, and reliable technical support (Greenhalgh, 1997). From the author's workplace perspective, the scarcity of technical support and training opportunities were two major reasons that had caused teachers to fear the technology at their disposal. This practicum dealt intensely with these two concepts and provided a overwhelmingly positive improvement district-wide.

Research studies by Plomp, Pelgrum & Steerneman (1990); Veen (1993); Williams and Moss (1993); and Easdown (1994) on teaching in secondary school indicate that the

development of the secondary teacher's use of information technology for teaching and learning is affected by two distinct factors: institutional-level factors and individual-level factors. These studies indicate institutional-level factors are such concerns as availability of adequate hardware, software, and curricular materials; provision of time for teachers to adapt to the use of new technology; technical assistance; administrative attitudes toward technology; and clear procedures for gaining access to the technology. Individual-level factors are concerned with the beliefs that teachers bring to the classroom situation about how curriculum should be taught and preconceptions about microcomputers and their relationship to the teaching/learning situation. During the author's practicum experience, a positive improvement was made in each participant's attitude toward how technology should be incorporated into his/her own particular content area.

Young (1997) wrote about rethinking the role of the teacher in this new age of high-tech tools by emphasizing that teachers who have taught with recent technology attest that the computer can help foster a lively learning environment and a more interactive mode of instruction through multimedia and graphics capabilities that is appropriate for today's information-rich world. From the author's workplace perspective this point was very much true as the new software applications have a more favorable acceptance today in the world of business than ever before because these are the tools that will be available in the "real world" of business and industry when students are placed into employment. This practicum made use of all forms of multimedia and graphics capability to ensure that participants were trained and ready to present this information to their students to prepare them for the information-rich world they will work in tomorrow.

McKenzie (1991) found that technology should be introduced in staff development training as a component of an on-going project that teachers are already engaged in so that "real-life" uses of the technology can be stressed as an integral part of all curriculum areas rather than a separate area of study. From the author's workplace perspective, this idea was used to express that computers and technology in general are tools of expression, storage, and analysis and are not to be isolated from everyday teaching and learning situations. During this practicum, this idea was enforced each month in some form when teachers incorporated technology into their lesson plans and collaboratory projects and reported on it.

Strommen and Lincoln (1992) and Helphinstine (1995) found that for teachers to incorporate technology more fully into the classroom several changes are needed, including time to learn new technology, change of attitude in technology being a fundamental part of rather than an "add-on" to every curriculum, lower class size, and administrative support for professional development. From the author's workplace perspective, some excellent points were brought out in that the administration has recognized the need for professional and technology development training and has provided for such this school year. The author's practicum experience enhanced and encouraged each teacher to effectively utilize the tools at their disposal for incorporation into daily teaching rather than as an isolated part of classroom learning by requiring the incorporation of one new form of technology each month.

Dede (1996) stated that to transform higher education, a realignment of education must take place with consideration being given to three vital conditions--the changing

nature of knowledge, information and scholarship; the needs of individual learners; and the changing nature of work and learning.

In a report by RAND Corporation available on the Internet, (RAND, 1996) on the challenge of creating a nation of technology-enabled schools, an important factor was identified in that teachers are expected to assess student progress, create appropriate learning opportunities, access resources needed for projects, and relate diverse instructional activities to the school's educational goals, yet few teachers have been adequately prepared to do so. The author's workplace has recently had state mandated educational goals and objectives imposed upon its teachers in regard to the President's Goals 2000 initiatives; and teachers in the district are not adequately prepared to meet those mandates at present. The author's practicum began to prepare these teachers appropriately to achieve these factors identified in the RAND report.

Another focus of the RAND report (RAND, 1996) indicated that time was one of the chief concerns facing educators today who are trying to go with technology's flow. School districts have not allowed sufficient time in the school day for its teachers' technological professional development, due to the attitude that time away from teaching is time wasted. From the perspective of the author's workplace, this philosophy has also been the norm in the past. The author feels that with this distance education training experience received during the practicum, the time factor barrier was overcome and sufficient professional development was achieved.

In a recent report by Howell (1996) reflecting on the School Year 2000 Initiative, a major emphasis in the paradigm shift of learning identified technology as only a small component in the educational process, with student access to more and different learning

resources as the foundation for curriculum reform. From the author's workplace perspective, there must be an increase in the use of CD-ROM, telecommunications via the Internet, on-line search services, and computer-driven technologies in order to achieve this federally and state mandated initiative. The author's practicum experience brought about a positive change in the use of such technologies and the way teachers delivered instruction via the technology through its requirement of monthly research, study, and incorporation of technology build into the instructional modules presented on the practicum web site.

Bingham, Davis, and Moore (1996) found that distance learners must assume responsibility for their own learning, actively question and obtain help, be flexible, and brace for technical difficulties in the two-way flow of information. From the perspective of the author's workplace, all of these factors have worked against the incorporation of technology into classrooms district-wide, as teachers became overwhelmed by technical problems with little help available. During the author's practicum experience, all of these problems were addressed and the participants at the completion of this practicum experience made a positive improvement within the district.

According to Gottschalk, (1996) in the field of distance education, educators must remain focused on the overall instructional outcomes and not the technology of delivery, although technology plays a key role. From the author's work place perspective, a systematic approach was taken to deliver the instructional objectives, resulting in a mix of media that all served specific purposes--the printed handout materials which supported the hands-on training provided hard copy backup to the on-line help facility built into the practicum web site, electronic mail increased interaction among teachers, and the web board increased collaboration among peers, participants, and the instructor. The focus in

the practicum experience was on the instructional outcomes; however, technology was the medium for achieving those objectives in the most effective manner.

Sherry (1996) stated that regardless of their level of classroom experience, teachers need support and communication with other teachers going through the same experiences when learning new technology, as some feel intimidated by the equipment even in an environment that is non-threatening. From the author's workplace perspective, on-line support through the built-in help facility and e-mail capability, and idea exchange through the web board helped to overcome the problem of teacher fear and intimidation within the school district. The author feels that these suggestions were used to the best advantage during the practicum experience.

Kell and others (1990) found five conditions that are conducive to change in the classroom--a shared teaching-learning vision; leadership and support for new technology from school administrators; working conditions allowing flexibility, time, and incentives to experiment with new instructional methods; opportunities for communication, peer support and interaction among teachers; and training and personalized technical support. From the author's workplace perspective, in past years the above conditions have been lacking; however, with the training provided through the practicum experience this improved. The author feels that most of these conditions were successfully met through the practicum experience.

The leadership roles assumed by the author during this practicum experience were as follows: (a) the author served as the developer, coordinator, instructor, and evaluator of all face-to-face and distance delivery training undertaken during the practicum, (b) the author served as the moderator during the web board and electronic chat classroom

discussions; (c) the author served as the web administrator, contact person, and technical support person for the distance education training site; (d) the author served as the training coordinator for the continuing education units awarded to participants for renewal of their teaching licenses as required by the State Department of Education.

Report of Action Taken

Preparation for implementation of the author's practicum actually began months before its onset with development and creation of the practicum web site during the author's Media and Technology course. This web site was linked from the author's school district home page a few weeks before the practicum began. Screen printouts depicting the distance education training web pages are located in Appendix E of this report.

In December, when practicum implementation officially began, participants were registered during telephone contact and/or personal visits to the author's school site microcomputer lab, where training was to be held. An assignment sheet and welcome informational memo were given to all participants at this time (see Appendix F). As school would be on a two-week Christmas break, participants were given assignments consisting of collecting certain items from their personal classroom rosters and files to be used in the initial training phase and to write an autobiography for presentation to the other members on the first day of training. A welcome invitation was also issued to each participant to begin to use the interactive threaded discussion board and visit the practicum web site if they had Internet access available to them at home during the vacation break. These activities were essential in setting the stage for the practicum to begin, creating enthusiasm for the training, and eliminating any fear the participants may have had toward the training. Participants were also asked at this time to mentally assess their interest and skill levels

toward technology and to be ready to present this in a short opening remark session at the initial hands-on training.

The distance training web site included the following interactive components: Main page with links to other pages, news and announcements page, faculty home pages site, on-line handbook help facility, access to an extensive glossary of technological terms, page for teacher resources including links to search engines and reference sources, monthly instructional modules (including a module for each month from February through June), lesson template for easy completion of the instructional modules, general directions and instructions page, agenda and objectives for the two-day initial hands-on training sessions, and a link to the interactive threaded discussion board.

Each component of the web site was an important tool for aiding participants in the successful completion of the training. Hands-on skills training was an integral part of preparing the participants for the training to be completed by distance delivery. A two-day initial training phase workshop consisting of eight hours each day of skills training in the proper use of the practicum web site, mouse and keyboarding skills, basic word processing, basic spreadsheet, basic database, e-mail techniques, and basic Internet navigation and search techniques, was held during the months of January, February, and the first week of March. Also included in this two-day phase was training on the use of Internet navigation software, electronic chat software and threaded discussion board techniques to be used by all participants for interaction, communication, and collaboration during the training phase by distance delivery. Web page development was an essential part of the practicum component and basic web development skills were developed during this initial two-day training phase. Refinement of these skills was accomplished through

research and study in proper web development techniques during the April instructional module by distance delivery.

In January, during this initial two-day training phase, handouts (prepared and placed into folders for each participant's reference) were distributed. These handouts were actually printed copies of items from the web site and the on-line handbook. Each web site was accessed and by having printed copies, this served to reinforce learning and give the participants a foundation for going back to their school workstations and beginning their own exploration and discovery.

By early March, after the initial two-day training phase for all groups had ended, participants were properly prepared to begin the monthly instructional modules to be completed via distance delivery on the web site they had become familiar with. This training was on going during the months of February, March, April, May, and June. E-mail, discussion board, and chat communication modes were then an integral part of the on-going monthly training. Each month a new lesson was posted on the monthly instructional modules page beginning with February and ending in June. Each lesson was based on the same standardized format and included the components of technology transfer, research, and professional development. Deadlines were clearly posted and lessons were standardized by means of a template that the participants could cut and paste into their word processor. Each lesson was then e-mailed to the author-instructor on or before the deadline. To accomplish this easily, handy e-mail links were provided on the modules and instructions pages. Feedback was given to each participant within a twenty-four hour timeframe. The lessons were graded on neatness, completeness, timeliness, and

appropriateness on a 100-point scale, with each of the four components weighed at twenty-five percent.

Monthly Lesson module topics included the following and printouts can be seen in Appendix G of this report: The Changing Role of Today's Teacher (February), Constructivist Theories and Technology Infusion (March), Web Site Development Techniques for Today's Electronic Schools (April), The Wired Classroom--Layouts and Design (May), and Incorporation of Technology into the Curriculum Through Internet Lesson Plans (June).

Monthly four-hour workshops beginning March through June were attended by all participants to hone the skills acquired in the initial training phase, to discuss and further research collaboratively that particular month's distance education lesson, to work on their collaboratory projects by scanning photographs and searching for and capturing graphic images for use in their school web sites, and to receive further skills training, as needed. These workshops proved to be the glue that kept the entire participant group together and was extremely beneficial in the overall success of this practicum project.

To encourage collaboration and interaction among the participants a collaboratory project was undertaken at each school site represented by the participants. Participants at each school site chose to place their school on-line via a school web site built collaboratively and finally linked from the school district home page. Samples depicting the structure of the main web pages for each school site may be seen in Appendix H of this report. The collection of the elements such as graphic images, scanned pictures, and all information was completed as a group. Each group then created a storyboard and

physically built the web site using the skills acquired during the initial training phase, monthly four-hour workshops, and June distance delivery instructional module.

An interactive threaded discussion board was another important component of this practicum experience. The author-instructor posted a topic at the beginning of each month that paralleled the monthly instructional module training by distance delivery. Each participant was asked to post a reply to this discussion and keep the topics moving. Printouts depicting the structure of this discussion board can be seen in Appendix I of this report.

Electronic classroom chat software using the author's university server was incorporated into the practicum process. Participants were encouraged to use this tool for communication purposes and the software was installed on participant workstations at participating schools. The participants initiated chat discussions when the need arose. The chat sessions were mainly used for quick information dissemination or help with various skills. Some typical uses for this medium during this practicum experience were for help in creating an e-mail address book at one remote site and for configuring an e-mail account at another remote school. This method of contact proved to be more effective, as one of the schools was on a long-distance toll area code and lengthy phone calls would have been costly.

The eight-month practicum-training phase ended with a final two-hour culmination training session and "show and tell" time. All participants were awarded colorful certificates depicting the practicum logo and graphics images from the web training site. An example of this certificate can be seen in Appendix J of this report. All participants' school principals were invited to share in the final hour of this event where refreshments

were provided and the completed collaboratory projects were unveiled for the first time. The practicum verifier, District School Superintendent, Director of Instruction, and Director of Teacher Training were also in attendance. Each participant shared ways they had incorporated technology into their classroom during this eight-month phase and completed an on-line evaluation of the training via a discussion board topic posting. A summative evaluation instrument was given to participants to take home and complete in their leisure so that more thought could be given to its completion. A copy of this instrument can be seen in Appendix K of this report. Participants were asked to return the instrument by school mail. The results will be used to improve and enhance instruction for the next semester when training is re-offered.

Some comments made in the final evaluation instrument are as follows: (a) "Cutting and pasting information is a breeze now;" (b) "The thought of building a home page scared me, but I found that it is really just simple word processing;" (c) "I have the confidence I need to use technology in my classroom after taking this course;" (d) "I now know the Internet holds a vast amount of information that is right at my fingertips just by learning how to search it out;" (e) "I used to just get bogged down in the information until I learned how to effectively refine my searching skills;" (f) "These tools were already available to me, I just didn't know what to do with them before this course;" and (g) "I feel I have become a better classroom manager by using technology to help me in the process."

Perhaps the greatest roadblock encountered during this practicum experience was in getting the microcomputer lab in the author's own classroom wired and Internet ready in time for the training to begin. Funds were at an all-time low in the district and there was no time to write a grant. A classroom at the local high school was considered for the initial

skills training phase as it contained the appropriate number of workstations, however, the Internet connections were all dial-up hard-wired connections and were extremely slow. Also, the machines in that particular lab were not updated with the software planned for this phase of the training. However, with the help of the author's practicum verifier at the school district MIS department, thirteen machines were made Internet ready two weeks before the training began. The only drawback to this situation was that this meant only half of the microcomputer lab was wired to the Internet and the other half of the lab was older outdated equipment that was not suitable for use in this training.

One major roadblock encountered during the course of this practicum was in the high percentage of participants who signed up for the training. Initial plans were to have two eight-hour hands-on training sessions for one group of twenty participants. However, due to there being 47 participants sign up, compounded with the fact that wiring and machine updates were only available on 13 machines, a revamping of the initial training phase had to take place within a short period of time. Instead of offering two training days to the expected 20 participants, now the author-instructor had to offer the same two training days to 47 participants. Thus, the initial training had to be conducted 4 times to accommodate 4 groups of 12 participants each, so that participants could have access to their own machine. Thus, two training days became eight and this quadrupled the instruction time for the hands-on training phase. In order not to slow progress because of this, at one point during the practicum, the hands-on face-to-face skills training phase and the distance delivery training phase were being conducted simultaneously for different groups.

One difficulty encountered during the practicum training was due to the lack of simple keyboarding skills by one group of participants from the district Headstart and Pre-k center. These participants are classified as teachers, when in essence they are day care attendees. This particular group of participants actually needed twice the amount of skills training provided and progress was slowed due to this factor. While their school was on-line to the Internet, there was only a couple of machines available for use there and this proved to be a hardship to this particular group. Therefore, these participants were allowed to use the microcomputer lab at the author's school to complete their monthly distance education lessons and collaboratory projects. Thus, the author-instructor had to be on duty while these participants were using the lab and this in itself produced even more work. However, the extra one-on-one instruction provided by the author-instructor for this group proved to be the deciding factor in their success of this training. It was decided that skill evaluation and post-testing for this group would take place at the end of the practicum training, rather than at the end of the initial skills training, as originally planned. This one decision and deviation from the original plans allowed for the greatest success rate for these participants, as well as boosted their self-confidence with using technology.

The only major deviation from the initial practicum plans included not providing skills training in Microsoft PowerPoint software. It was decided that this particular software was too technical for the majority of the participants and would not be used once they returned to their own school sites. Thus, due to the brevity of the training planned for this software and the complexity of the software itself, the planned PowerPoint training and presentations were eliminated from the initial skills training plans to allow more time

for Internet skills training. This decision was felt to be more beneficial to the participants once they returned to their school workstations and began using the skills acquired.

Chapter V: Results

Results

Schools in the district are as far as 35 miles apart in distance and all schools have been placed on-line to the Internet; however, teachers are not effectively utilizing the valuable research tools of the Internet and communications tools of e-mail available right at their own classroom workstations for incorporation of technology into the curriculum, telecommunications, professional development, or classroom teaching/learning enhancement. Thus, the main purpose of the author's practicum was training faculty to enhance incorporation of new technology into the classroom teaching and learning situation by becoming comfortable and efficient with the equipment and software readily available for their use, while providing quality professional development experiences earning continuing education units through a distance delivery mechanism providing for any time/any place learning.

Outcome 1. Participants will use the Windows 95 operating system to boot their computers and move fluidly from one application of Microsoft Office Suite to another.

This outcome was met.

A performance-based post-test was given to each participant during the initial eight-hour hands-on training session. The post-test consisted of being asked to open and close Excel, then Word, then Access, then PowerPoint software from the Microsoft Office Suite. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 2. Participants will use Microsoft Word 97 for simple word processing applications such as letters and reports.

This outcome was met.

During the initial hands-on training, each participant was given a performance-based post-test. The post-test consisted of a creating a simple one-page letter and a three paragraph report. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 3. Participants will use the mouse to perform simple cut and paste procedures from one application to another.

This outcome was met.

During the initial hands-on training, each participant was given a performance-based post-test. The post-test consisted of cutting a block of text from a web page on the Internet and pasting the information into a blank word processing document. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 4. Participants will use Microsoft Excel 97 for simple spreadsheet applications in grade computation.

This outcome was met.

During the initial hands-on training, each participant was given a performance-based post-test. The post-test consisted of creating a simple spreadsheet with 10 students' names and grades. The participant then had to derive a formula for computing each student's average. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 5. Participants will use Microsoft Access 97 for simple database applications for classroom records management.

This outcome was met.

During the initial hands-on training, each participant was given a performance-based post-test. The post-test consisted of creating a simple database with 10 students' names, addresses, parents' names, and telephone numbers. The participant then had to sort the database into alphabetical order by student's last name. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 6. Participants will use Netscape Page Composer software to create a simple personal web page to be included in the faculty home pages on the school district Internet site.

This outcome was met.

During the initial hands-on training, each participant was given a performance-based post-test. The post-test consisted of creating a simple web page consisting of an embedded photograph, one hotlink to a favorite web site, and one graphic image captured from the web. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test. The author-instructor was then responsible for uploading via File Transfer Protocol each participant's web page into the school district server.

Outcome 7. Participants will use the printed handout materials and the on-line help facility built into the practicum web site, and accessed through the school Internet server, together as resources for solving typical problems encountered while using the software installed on their computers.

This outcome was met.

During the initial hands-on training, each participant was given a performance-based post-test to measure this competency. The post-test consisted of a written problem scenario given to each participant. The author-instructor observed each participant while performing the actions needed to troubleshoot and solve the given problem. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 8. Participants will use Netscape Navigator software to research topic areas from their own teaching field, using Internet search engines.

This outcome was met.

During the initial hands-on training, each participant was given a performance based post-test to measure this competency. The post-test consisted of the participants' choosing one topic to search for from a list of topic areas representative of twenty content areas within the K12 curriculum. The author-instructor observed each participant while performing a search for content-specific information. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 9. Participants will incorporate at least one simple form of technology into their teaching curriculum each month during the distance delivery phase of training.

This outcome was met.

To measure this outcome, a section of each month's instructional module lesson was devoted to the participants' writing several paragraphs about how they incorporated some form of technology into their curriculum each month during the months of February through May. All 47 participants were able to meet this objective with 100% accuracy

with instructor observation of their written achievements when each month's instructional module was submitted via e-mail.

Outcome 10. Participants will use Netscape Mail for communication purposes in daily correspondence and in attaching documents to correspondence.

This outcome was met.

During the initial hands-on training, each participant was given a performance-based post-test. The post-test consisted of creating and sending a simple e-mail message to the instructor and attaching a letter previously saved on their disk. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 11. Participants will collaborate and exchange ideas with their peers in an instructor-monitored web discussion board on topics pertaining to incorporation of technology into the curriculum, professional development and current trends in education

This outcome was met.

During the initial hands-on training, each participant was given a performance based post-test. The post-test consisted of posting a reply to a message previously posted on the web board by the author-instructor. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Outcome 12. Participants will be able to successfully research web sites and glean current information that can be used for professional development in their particular teaching fields.

This outcome was met.

During the initial hands-on training, each participant was given a performance based post-test to measure this competency. The post-test consisted of the participants' choosing one topic to search for from a list of topic areas representative of professional development within the K12 curriculum. The author-instructor observed each participant while performing a search for content-specific professional development information. All 47 participants were able to meet this objective with 100% accuracy with instructor observation of their performance during the post-test.

Discussion

Technology is creating a new and profound revolution in education and has left educators rushing to catch up. Electronic technology has penetrated into virtually every area of society and the very nature of work itself has changed dramatically. The workforce of tomorrow demands a technologically literate worker to fill each position.

Today's children have grown up with remote controls in hand and spend more time watching videotapes and television than reading. Today's toys blink, flash, talk and interact with the children. Nintendo and Atari have brought electronic technology affordably right into the average home. In shopping malls, public gathering places, and museums around the country it is common to see computer-based information kiosks for ready access and retrieval of information by people of all ages, cultures and lifestyles. Children of today have been raised in a world of instant access to information, vivid and colorful images replacing text and an environment where they easily and readily control the flow and access of information.

Several changes must occur in order to incorporate technology more fully into the classroom. To explore technology on their own, teachers must be provided with the time,

means and support to accomplish this. If we are to educate tomorrow's workforce, hence today's children, and give them the education necessary to succeed in this technologically intense world, we as educators must replace our existing methods of instruction. Teachers are the powerful driving forces needed for this positive change.

According to McKenzie (1991), technological changes in education must first be accomplished through staff development at the local school level. A nine-step approach is outlined by McKenzie in developing a successful training program. Two of the approaches that were outlined in McKenzie's work were incorporated into the author's practicum project and have a direct implication on its success: consider the fears, anxieties and feelings of the learners and respond to their interests, concerns, and appetites when developing training programs.

Pacing of skills training becomes a critical issue in successful teacher training. Training sessions should be carefully planned so that when participants reach the saturation level, acquisition of new skills halts and practice of those immediately learned begins. Training content should be of interest to the participants so that they have an ownership in what is taking place.

The author feels that the pacing of the skills training in this practicum was a bit over the saturation level in some cases; with these cases being the participants who lacked even the very basic skills of keyboarding and mouse movement. Participants were eager to learn and excited about the material presented, however; and some participants could not wait to get home or to their classroom workstations to reinforce their learning with practice. Thus, the interest level of the participants, their strong desire to succeed, and the relativity of the material presented were the implications for success in this case.

According to Barker and Hall (1994, October), distance education technologies are a vital link to rural schools in overcoming the disadvantages of geographic isolation by connecting teachers with their peers at other schools, by increasing access to information and instructional resources, and offering opportunities for inservice training or professional development without leaving the school site.

The connectivity factor was one of the greatest implications for success in this author's practicum. Participants at remote school sites were able to connect to the web page and see what was going on in the district, chat with their instructor, converse with their classmates and peers, collaborate with their peers, and interact together without leaving their school workstations during their planning period or free time. One of the most profound discoveries among the participants was that the capability was already there--they just were not trained in its use.

Kearsley (1997, November 22), Willis (1993), Polyson, Saltzberg, and Godwin-Jones (1996), McGarth (1998) and Boettcher and Conrad (1997) all emphasize good practices in the development and use of on-line instruction as an implication to success of any distance delivery course. Some expected deliverables of an interactive distance education program as summarized by these authors include a web-site with a syllabus including goals and objectives, structured activities, a library of references and resources, course mentors, and a handbook or guidebook for participants. Personal home pages can be used to foster interaction as participants can learn about each other through this means. Bulletin board and chat software is another method of fostering interactivity among participants. All of these ideas worked together in combination for the total overall success of this author's practicum.

Willis (1993) stressed that one of the most vital links to success in any distance education course is the hands-on training of the participants with the technology of delivery prior to its intensive use. The participant's comfort with the communication mode will also insure greater success. The author's practicum placed skills training in a hands-on face-to-face non-threatening format at the beginning of the training. This skills training included the use of e-mail and discussion board technique and hardware and software technique mastery before the introduction of the distance delivery format. Thus, all participants were fully prepared and comfortable with the technology and the delivery format once placed on their own at the remote sites. This is probably the strongest implication for the success of the author's practicum.

Kearsley (1998, November 22) noted several techniques that have a proven success rate in distance education. These techniques included quick feedback turnaround on assignments via e-mail response, completion of monthly assignments via an on-line mode, and major assignments involving projects that are to be completed in a collaborative nature. Kearsley stressed that if participant assignments are not given prompt feedback, it discourages the student to continue. During the author's practicum, lessons completed via e-mail were given feedback within a 24-hour timeframe. Students were then encouraged to move onward in their studies and continue their skills practice and research.

Zwier (1998), in discussing successful staff development programs, stressed that training for basic skills and curriculum integration could be of the greatest benefit to teachers in the incorporation of technology into the curriculum. He suggested providing models and class exercises that would give teachers the opportunity to use their own curriculum topics to create lesson plans for on-line instruction as a part of basic

technology training. During the author's practicum training, one of the monthly instructional modules created via distance delivery was to research a curriculum content topic and develop a lesson plan for incorporation of this topic and its related technology into a day's instruction. Each month participants were asked to incorporate one simple form of technology into their curriculum and write about it.

The EDC/Center for Children and Technology (1997), an on-line educational exchange program sponsored by the Milken Corporation, provides an excellent summary of tips for using e-mail and telecommunications to support professional development activities. Technical support seemed to be one of the areas of concern for all participants in the author's practicum, as they had received very little support in past school years. One of the points focused upon in the Milken Corporation findings was that the most significant deciding factor in an individual's participation in online discussions and distance delivery training was his or her access to technology and to a source of assistance when problems with the technology arose. The author served as technical support person via e-mail, fax, chat, personal visit, or telephone contact to all school sites during the course of this practicum experience. In most cases, technical support problems were handled via telephone or e-mail exchange in a timely and satisfactory manner. In one instance, a personal visit to the school site was made to troubleshoot the equipment, thus providing for the success of the training. Participants did not give up, as they knew technical support was readily available.

One unanticipated factor that developed at the onset of the author's practicum training was the high percentage of participants who enrolled in the training. Plans currently made by the author seemed to be ineffective for training this great number of

participants. Baumbach and Bird (1998) stressed that effective technology educators need to be proactive. Savvy technology-using educators don't wait for the perfect opportunity or the perfect software or the perfect lab or even the perfect student. These techno-savvy educators are realists who know that computers sometimes fail, that software sometimes has "bugs," and that they will not always have the microcomputer memory or the peripherals they need or want. The author began this practicum training with a bare minimum of microcomputer access and on-line connectivity in the assigned laboratory. It seemed discouraging at first and almost an impossibility the week before the practicum was to begin. However, with careful planning and organization, the training was a success despite this factor. Each participant reached or exceeded set personal goals, as well as the goals set by the author.

In conclusion, it is impossible to deny the tremendous effect on our society of the rapid technological growth taking effect in our society on a global realm. This technology explosion has changed the way we live, the way we do business and the way we interact and communicate with each other. Thus, from an academic standpoint, these technological advancements must change the way we teach and learn. Today's business world demands that our schools prepare an educated worker, one who can effectively use technology in a global marketplace. Our entire government, including the President and Vice-President of the United States, are convinced that technology must be a central element for improved student learning and educational reform. The catalysts that spur technology use in the classroom are the new skills needed in tomorrow's workplace. Classroom teachers hold the key to the effective use of technology in improving learning. Thus, if teachers don't understand how to employ technology effectively to promote student learning, educational

technology initiatives mandated by our government, and the billions of dollars invested in them, will be wasted.

The only way to close this teaching and learning gap is through effective teacher technology training. Teachers must be prepared to teach in tomorrow's classrooms. Rather than wait to see what those classrooms will look like, teachers must be proactive and experiment with and become effective with the application of technology for teaching and learning that is currently available to them. The only way to accomplish this is through aggressive professional development and training.

A new understanding of the deep impact technology is having on society as a whole and how technology has changed the nature of work, of communications, and of development of knowledge is of vital importance to today's teacher. Finally, teachers must develop a new attitude that is "fearless" in the face of technology--one that inspires them to become lifelong, continual learners and encourages them to take risks.

Recommendations

Due to the author's own experience in teaching software applications classes for ten years, keen organizational strategies, and the ease with which this practicum was implemented, several recommendations can be made that will make teaching the basic skills portion of this training easier on the instructor as well as participants. One rationale being that groups divided in this manner will all encounter similar problems at about the same time and not halt learning of the other groups. Based on first-hand experience, recommendations can also be made for keeping track of results, daily and weekly happenings, and unexpected outcomes along the way. The author's recommendations are as follows:

1. Group participants by skill level for the initial training--beginner, intermediate, or advanced levels seem to provide for the best grouping.
2. Assign one more advanced student from each representative school site to be the on-site mentor. Have the participant keep a log and award continuing education units for each hour spent in mentorship as an incentive.
3. Assign collaboratory projects according to school sites rather than skills groups for greater success, as these participants are in daily contact and have similar interests.
4. Assign only one participant to a microcomputer during the skills training for greater success in learning through hands-on.
5. Provide sufficient time for practice of skills before the average saturation level is reached.
6. Back up any on-line materials with printed copies for visual learners and for reference.
7. Have assignments and expectations in written form to the participants ahead of time for their preparation and planning.
8. Conduct a thorough needs assessment before planning the training.
9. Keep a weekly activity log and record a summary of what happened during the training in that week, being careful to record special challenges, unexpected events, or celebrations (see Appendix L).

The author's recommendations for furthering the ideas used to solve the problem in the work setting are as follows:

1. Offer this same training to a new set of participants in the next semester of the school year, while those who just participated are eager to share their successes with their peers and encourage their participation.
2. Use the participants who just finished the training as the mentors at each representative school site and award continuing education units to these participants for their willingness and expertise.
3. Use the summative evaluation instrument given to all participants at the end of the training to enhance and improve next semester's instruction.
4. Use the "Sound Off" section of the monthly instructional modules to update the web site with recommendations made by the participants.

Dissemination

This practicum was such a success within the author's school district that the District Director of Teacher Training has asked for a repeat of the whole program for a new group of teachers in the fall semester. Several of the participating teachers have also recommended it highly to their co-workers and peers. Several teachers have asked to rejoin to further develop their skills.

Further dissemination will be accomplished during the author's 1998 Summer Institute at Nova Southeastern University when papers to be presented for the Systems Design study area will focus upon this practicum. These papers include a critical evaluation of the practicum's effectiveness from a distance education standpoint, a thorough curriculum evaluation of the entire eight-month training, and a summative evaluation of the training in preparation for the fall semester. These papers will be published on the web and the web addresses posted on the Systems Design Discussion

Board for peer review and comment from doctoral clusters one through three of Instructional Technology and Distance Education.

Further dissemination of the practicum may also be accomplished through professional journal contribution. An invitation has been extended by Professor Piet Kommers of the University of Twente in the Netherlands, one of the 1997 Summer Institute instructors, for publication of the development process of the practicum's web site prototype in his university's educational journal in the early spring of 1999. Publication has already been accomplished for the first paper written for the author's Summer Institute Systems Design Course. This paper was published by InTRO, a nationally known, web-based journal for leaders in the field of instructional technology.

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APPENDIX A

COUNTY SCHOOL DISTRICT INSTRUCTIONAL FACULTY SURVEY

County School District
Instructional Faculty Survey

I am a doctoral student in Instructional Technology and Distance Education and will be beginning my practicum study soon. The instructional faculty of the school district will be involved in this study and will receive valuable instruction, which will include continuing education credit units on basic microcomputer skills, Internet and E-mail. Please answer the following questions and return this form as ***soon as possible*** by inter-school mail to Debra Pahal, Technical Institute, Business Technology Education Department. Your help is very much appreciated.

1. Please check all microcomputer areas that you have a ***basic*** working knowledge of.
   _____Word processing software _____Graphics/presentations software
   _____Database software _____Internet navigation software
   _____Spreadsheet software _____E-Mail software

2. How ***often*** do you use the Internet?
   _____Less than half an hour a day _____As often as possible
   _____Never _____Only if absolutely necessary

3. When you use the Internet, check all that apply.
   _____Used for pleasure only _____Used for classroom instruction
   _____Used for research & reference _____Used for professional development

4. When you access the Internet, which ***means*** do you use?
   _____FIRN School account _____FIRN personal account at home
   _____Internet Service Provider (list name)_____
   _____Commercial on-line services such as America-On-Line, CompuServe

5. Have you incorporated ***any form*** of technology into your classroom curriculum, if so please explain?_____

6. Do you use E-mail for communication purposes at school or home? _____ Yes _____ No

7. Are you familiar with Internet search engines? _____ Yes _____ No
   If so, list some you have used recently used_____

8. Would you be interested in participating in a continuing education unit course for Instructional faculty on Internet skills, E-mail skills, and incorporation of technology into the curriculum you teach? _____ Yes _____ No

9. Do you feel *comfortable* with using the microcomputer equipment and software that is provided for your use by the school district? (Please be honest!) _____ Yes _____ No

10. Do you have any other comments or suggestions?_____

The following information is optional, but would be helpful:

Name_____ Teaching Area_____

School Location_____ Telephone Number_____

Microcomputer Skill Level: _____Beginner _____Intermediate _____Advanced _____Expert

APPENDIX B

COVER MEMO TO SCHOOL PRINCIPALS

Memo

To: District Principals

From: Debra L. Pahal, Chairman, Business Technology Education Department

Date: September 1997

Re: Faculty Training Survey

I am a second-year doctoral student in Instructional Technology and Distance Education at a University in the southern part of the state, and have begun Practicum I. The MIS Director will be verifying my practicum study. My approved problem relates to instructional faculty training via a distance education site to be linked from the County District Schools Web Page. The training will include basic microcomputer skills, Internet Skills, and E-mail Skills. There is a possibility that faculty who participate will be offered continuing education units.

In order to collect hard data and compile statistics about certain criteria in our district, I will need to involve the instructional faculty by asking for their completion of a survey. This survey will also be used to plan and prepare the instruction that will hopefully begin in the early spring. I have enclosed copies to be distributed to your instructional staff as soon as possible. Please distribute the forms and have them complete and return to me via school mail. Should you need more forms, please feel free to photocopy as many as you need.

Thank you in advance for helping me secure this information. I will keep you informed of future developments.

APPENDIX C

THANK YOU MEMO TO SCHOOL PRINCIPALS

Memo

To: District Principals

From: Debra L. Pahal, Chairman, Business Technology Education Department

Date: October 1997

Re: Faculty Training Survey

I would like to take this means to thank you and your staff personally for helping me secure the hard data I needed to begin my practicum study in the Ed.D. Program, by filling out the survey form. I received a total of 91 responses in a very timely manner and was able to compile vital information that will be used to write the outline and proposal and begin preparation for the training involved.

I have contacted Mr. Jimmy Bowden at the district office about offering continuing education units to the faculty who are interested in the training. The MIS Director will be advising my practicum experience. I will keep you informed as developments occur. This cannot be accomplished without your support and I want you to know how much it is appreciated.

APPENDIX D

SAMPLE POST-TEST

Technology for Teachers Distance Delivery Course
Directions to the Student
Post-Test on Windows 95 Competencies
Outcome Number One

General Directions to the Student:

Using the microcomputer equipment provided in the laboratory and your own formatted floppy diskette, you will perform the following steps while your instructor observes evaluates your performance.

1. Power-up the microcomputer.
2. Power-down the microcomputer.
3. Power-up the microcomputer a second time and place disk in proper drive.
4. Open Microsoft Word 97.
5. Close Microsoft Word 97.
6. Open Microsoft Excel 97.
7. Close Microsoft Excel 97.
8. Open Microsoft Access 97.
9. Close Microsoft Access 97.
10. Open Microsoft PowerPoint 97.
11. Close Microsoft PowerPoint 97.

Scoring Information:

You will be scored by the instructor on two basic criteria: (1) that you perform each step completely and (2) that you properly use the equipment provided. You will be scored on a checklist type basis. Each step performed correctly will receive a checkmark beside "Yes." Each step not performed or performed incorrectly will receive a checkmark beside "No." A final score based on a 100-point scale will be assigned to this assessment.

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Technology for Teachers Evaluator's Checklist
Post-Test on Windows 95 Competencies
Outcome Number One

Name_____ **Date**_____ **Final Score**_____

Evaluator Instructions: Each competency performed = *Yes*. Each competency not performed = *No*. Compile an objective score by totaling boxes provided in each section. Compile a final score on a 100-point scale by using scoring box provided at the end of the test. Place the final score in the blank above.

1. Power-up and Power-down the Microcomputer	Yes	No
Locate power switch to computer, monitor, and printer		
Flip all three switches on in any order		
Wait for the operating system to load		
If error message is encountered, troubleshoot and follow screen directions		
Put diskette into "A" Drive		
Click the start bar, slide up to "shut down the computer," click mouse		
Make sure radio button beside "shut down the computer" is filled in and click "OK"		
Wait for the message "It is OK to shutdown your computer"		
Turn off the power to the computer, monitor and printer		
Remove diskette from the drive		
TOTAL (10)		

2. Open and Close Microsoft Word 97	Yes	No
Load Windows 95 Operating System into the microcomputer		
Click start bar, slide up to programs, slide right to Microsoft Word, click mouse		
Wait for Word to load, if unsuccessful, troubleshoot and retry		
Click "File" on the Menu Bar, Slide down to "Exit Word," and click "OK"		
TOTAL (4)		

3. Open and Close Microsoft Excel 97	Yes	No
Make sure Windows 95 Operating System is properly loaded into the microcomputer		
Click start bar, slide up to programs, slide right to Microsoft Excel, click mouse		
Wait for Excel to load, if unsuccessful, troubleshoot and retry		
Click "File" on the Menu Bar, Slide down to "Exit Excel," and click "OK"		
TOTAL (4)		

4. Open and Close Microsoft Access 97	Yes	No
Make sure Windows 95 Operating System is properly loaded into the microcomputer		
Click start bar, slide up to programs, slide right to Microsoft Access, click mouse		
Wait for Access to load, if unsuccessful, troubleshoot and retry		
Click "File" on the Menu Bar, Slide down to "Exit Access," and click "OK"		
TOTAL (4)		

5. Open and Close Microsoft PowerPoint 97	Yes	No
Make sure Windows 95 Operating System is properly loaded into the microcomputer		
Click start bar, slide up to programs, slide right to Microsoft PowerPoint, click mouse		
Wait for PowerPoint to load, if unsuccessful, troubleshoot and retry		
Click "File" on the Menu Bar, Slide down to "Exit PowerPoint," and click "OK"		
TOTAL (4)		

SCORING

Total Yes Boxes Checked	
Total No Boxes Checked	
Difference in Above	
Difference X 3.8 = Final Score	

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APPENDIX E

PRINTOUT OF TECHNOLOGY FOR TEACHERS WEB SITE

Technology for Teachers

- Technology Glossary
- On-Line Handbook
- Faculty Home Pages
- News/Announcements
- Teacher Resources
- Teacher Training Modules
- Bulletin Board

Taylor County
SCHOOL DISTRICT
TEACHER TECHNOLOGY
TRAINING
Main Men.

Welcome! You have now entered the Taylor County School District teacher technology training web site. This site will be used throughout the school year to provide staff training, announcements, links to valuable resources for enhancement of classroom teaching and learning, handy links to neat search engines, employability skills training, a place to put your very own web page, and monthly instructional modules for teacher continuing education credit. If you are a visitor to this site, we welcome you also and hope the information provided is helpful to you.

On-Line Handbook. A valuable and informative handbook that is available on-line by clicking on the icon link will help you with those simple tasks that you may forget from day to day, such as how to navigate in Netscape, how to open and close Eudora e-mail, and how to cut, copy, and paste information into your word processor.

As your web administrator and instructor for the monthly continuing education modules, I hope you enjoy this site. Please feel free to offer your comments or suggestions for its improvement by e-mail.

GOOD LUCK AND HAPPY SURFING!!!!!

For comments & questions, contact web administrator

Visitors since May 28, 1998

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pahald@taylor.k12.fl.us

Taylor Technology for Teachers

Technology Glossary

The following link takes you to a handy glossary of technology terms and acronyms. This site is linked to the "Learn the Net" series available on the Internet. Click on the link below to get to the glossary.

Technology Glossary

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pahald@taylor.k12.fl.us

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Taylor Technology for Teachers
ON-LINE HANDBOOK

This on-line handbook is meant to supplement and provide quick information contained within the printed, detailed handbook that was given to each staff member during the initial training workshops. If you need additional copies, please contact the web administrator. To quickly get to the tips you are searching for in this handbook, click on the words below.

Eudora E-Mail Tips

Netscape E-Mail Tips

Netscape Navigator Tips

Cutting and Pasting Information Tips

Screen Grabs Tips

NSChat 2.0 Setup Tips

Eudora E-Mail Tips.....

1. **To open, click on your desktop icon for Eudora. Enter your password, unless you have set the preferences to automatically enter it, and the program should load.**
2. **If you have mail, the program will retrieve it from the server and alert you with a "new mail" message and tone. Click OK on that message. If you do not have any mail, there will be no tone and the message box will say you have no mail.**
3. **To compose a message, click "new message" on the menu bar or the new message envelope icon on the toolbar. An e-mail box will appear on the screen. Fill in the e-mail address to the recipient you wish to mail to. Fill in a subject line or any copy to addresses. Hit enter to get to the body text area. Begin to write your message.**
4. **To send, click the "send box" on the top left corner. Your message will be sent to the recipient automatically.**
5. **To reply to a message you have received, you may hit the "reply" icon on the menu bar after reading the message on the screen. A "compose message" box will appear with the recipient's and sender's e-mail address already filled in. Fill in the subject and copy notations and go to the body area and write your message. Hit "send" icon to mail the message.**
6. **To attach a file to your message (such as your monthly instructional module), simple hit the "attach file" icon. A box will appear asking for the name of the file to attach. Be sure to fill in the drive letter and COMPLETE file name of the file you want to attach. Example: A:\Nov.doc would be the name you would type in for the November instructional module that you typed in Word97 and saved to a floppy disk located in the A drive.**

Taylor Technology for Teachers
LINKS TO FACULTY HOME PAGES

Click on the names below to take you to a personal home page of that faculty member. Faculty members' names are in alphabetical order for quick reference. When you finish viewing the faculty member's home page, remember to use your "back" browser button to get back to the distance education web site.

Judy Dorman
Pat Dosher
Barbara Drawdy
Ellen Faircloth
Herma Hart
Sylvia Ivey
Faye Lashley
Linda Lundy
Elizabeth Nall
Lana Norberg
Debra L. Pahal
Sandy Parker
Kathy Roebuck
Sharon Smith
Carol Tumlin
Ann Turner

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Taylor Technology for Teachers
SCHOOL NEWS & ANNOUNCEMENTS

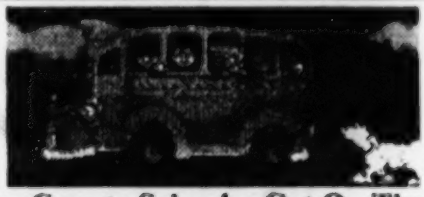
Welcome to the school news and announcements page. You can have messages posted to this page about current events, late-breaking news in your clubs and organizations, or most anything worthwhile to teachers in the district. Please call the web administrator, Debra L. Pahal, at the Business Department at (850) 838-2545 Ex. 136, or send an e-mail message to Debra Pahal before 7:50 a.m. each day for your item to be included in that day's news flash or announcements section.

Important Dates

Class of 1973
25 year Reunion
See Details Below!!!!

Spring Break
April 10-19

Last Day for Students
May 21



Taylor County Schools--Get On The Bus!
Our 1997-98 District Motto

TAYLOR COUNTY BULLDOGS
1997-98 TITLE 3A
STATE FOOTBALL CHAMPIONS

CONGRATULATIONS!!!
Congratulations TCHS Band!
Straight Superiors Again!

Announcements

*****The Taylor County High School Class of 1973 is planning a 25 year reunion for June 13-14. The place is undecided currently, but the cost will be $100, including a dinner and a dance featuring Tom and the Cats from Tallahassee. A planning meeting is scheduled for Monday, Feb. 9, at 7 p.m. at Denny's Restaurant in Perry. All are welcome to attend the meeting. For more information, phone Becky Moon Jarvis or e-mail Margaret Agner Cooksey at cooksey_m@popmail.firn.edu**

*****Congratulations to the 1998 Taylor Teacher of the Year, Mrs. Mildred Fike, a teacher at Gladys Morse Elementary School. Top Three Finalists were also Mrs. Ann Joiner, Science teacher at Perry Primary School and Ms. Debra Pahal, Business Education Instructor at Taylor Technical Institute.**

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Taylor Technology for Teachers
TEACHER RESOURCES

This page is "under construction" and will constantly be upgraded with new and valuable links and information as you go through the course of this study. Should you have a link that you feel needs to be added to this site, please contact the web administrator.

Technology Glossary --Current and up-to-date definitions

Search Engines

Complete Internet Searching Guide

Search Engine Tip Sheet

Educational References and Handy Links

NEA--Teaching, Learning, and Technology

Florida Education Community--Schools, Colleges, FIRN, State Dept. of Ed.

National Education Association

The School Page--The Educator's Resource

The United Nations CyberSchoolbus

The U. S. Department of Education

The Interactive Teacher On-Line

National Foundation for the Improvement of Education--Grants and more....

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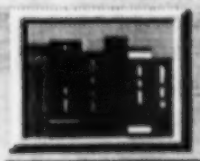
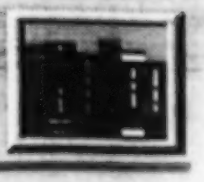


Taylor Technology for Teachers
TEACHER TRAINING MODULES
Main Menu



General Directions/Instructions

Distance Education Two-Day Orientation Workshop

Monthly Continuing Education Modules

November

December

January

February

March

April

June

May
Hip Hip Hooray!

July

E-Mail Instructor

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Taylor Technology for Teachers
GENERAL DIRECTIONS & INSTRUCTIONS

Before you begin....
This page includes directions and general instructions for completing the monthly continuing education modules. In order to receive proper school district credit, lessons must be completed and submitted in the outlined manner. All lessons must be submitted by the deadline clearly indicated on each monthly lesson module.

General How To's...

1. **Access the Monthly Instructional Module Page for the month of instruction you are completing. The lesson is designed to be completed in two one-hour planning periods at your own classroom workstation. Should it take longer, please note that on your lesson when turning it in and you will receive full credit for the time involved.**
2. **There is a link from each module to a template that can be copied and pasted into a blank word processing document so that all student's work will be standardized. Use the directions on the template to set up your template document BEFORE you begin work.**
3. **Note the "deadline for submission date" and do the assigned work according to the instructions therein.**
4. **Save all work to a floppy disk for backup purposes.**
5. **E-Mail a note to your instructor that the assignment is completed and attach the work as a word processing document to your e-mail. Please note on your e-mail the type of word processing software you used to complete the lesson. Note: I will not be able to receive lessons completed in MAC format.**
6. **Check your e-mail within a few days for grade, feedback and corrections or revisions, if any.**
7. **Save a copy of the e-mailed grade for each assignment for documentation purposes.**

Formatting How To's...

1. **All work should be completed in a word processing software and saved to a floppy disk.**
2. **Default spacing, margins, fonts, indentions, and justification should be used.**
3. **A header should be set at the top of the document, consisting of your name, lesson month, and work site in left-aligned format. Note: If you use the template provided, this information is already typed for you.**
4. **Each subsequent page should then contain this same header for identification purposes.**
5. **Each question must be set out in bold, clearly numbered and written out in it's entirity. The answer must immediately follow. You may use cut and paste from the Internet, but be neat and consistent.**
6. **All references, whether URL or printed matter, must be listed as the last page of your assignment and identified with the words "References Used."**

Module Specifics...

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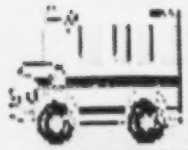
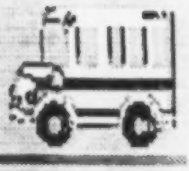


Taylor Technology for Teachers
Distance Education Two-Day Orientation Workshop
Hands-on Training



Day One Training:

1. Welcome and Introduction--Instructor and all Participants
   (Sharing Biographies & Expectations)
   Overview of Two-Day Workshop

2. Windows 95 Pre-Test
   A Touch of Windows 95 Basics....
   Minimize, Maximize, Restore, My Computer (Properties, Scan, Defrag)
   Format a diskette and scan for viruses using Norton or McAfee Antivirus
   Control Panel (Printer Functions)
   Moving the Start Bar
   Windows Explorer--Creating a New Folder, Copying and Moving Files
   Using Windows 95 Help
   Windows 95 Post-Test

3. Excel97 Spreadsheet Basics
   Pretest
   Tutorial Handout and creation of a grading spreadsheet by Dennis J. Pyler
   of Springdale Schools in Arkansas
   Posttest

4. Word97 Basics
   Pre-Test
   Minimize, Maximize, Save As
   Create a Professional Memo Using the Template, Save to Disk
   Create a Student Database and Sort by Last Name, Save to Disk
   Cut and Paste Information From One Document to Another
   Screen Grabs
   Post-Test

5. Taylor County School District Internet Acceptable Use Policy
   Sign Agreements

6. Netscape Navigator Basics
   Open, Close, Minimize, Maximize, Back Arrow, Forward Arrow, Home, Print, Location Bar

---

Day Two Training:

7. Technology Pre-Test
   Internet Basics (Items 7, 8, 9, 10, 11, 12, and 14 are copyrighted pages from
   "Learn the Net" series by Paradesa Media)

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8 The World Wide Web

9. Web Searching Skills (Practice with several search engines)
   Searching for animated gifs for home pages, capturing gifs on disk

10. E-Mail Skills
    Configuring Netscape E-Mail
    Practice Sending/Receiving/Deleting Messages
    Attaching and Opening File Attachments/Practice

11. Conferencing

12. WebChat
    Hands-on Practice in Using Netscape Chat 2.0 on the Nova Server

13. Discussion Boards
    Introduction to and Practice With Taylor Technology for Teachers Web Board

14 Glossary

15. Building a Home of My Own
    Using Netscape Page Composer to Build a Personal Home Page
    Embedding gifs, images, and links to home pages
    Editing and maintaining the home page with Netscape Composer

16. Taylor Technology for Teachers Distance Education Web Site
    Hands-on Practice in Navigating the Site
    Teacher Training Modules Practice
    Template Cut and Paste Practice
    Monthly Lesson Expectations and Directions

17. Homework

18 Collaboratory Project Discussion
    Monthly Face-to-Face Meeting Announcements

19. Workshop/Instructor Evaluation

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Taylor Technology for Teachers
Distance Education Two-Day Orientation Workshop
OBJECTIVES

At the end of this two-day face-to-face hands-on training session, the particpipant will....

1. demonstrate Windows 95 basic skills of minimize, maximize, restore, scan & defrag, my computer properties, printer functions, disk formatting, and using help tutorial.
2. demonstrate Excel spreadsheet basics by creating a grading spreadsheet.
3. demonstrate Word word processing basics by creating a memo from the professional template, a sorted database, cut and paste operations, and screen grabs.
4. become familiar with the School District Internet Acceptable Use Policy
5. demonstrate Netscape Navigator basics of open, close, minimize, maximize, back and forward browsing, home, print, location bar.
6. become familiar with the Internet and topics such as Netiquette, on-line safety, privacy, bookmarks, search engines, viruses, URLs, conferencing & future of the Internet.
7. demonstrate efficient Internet searches using a variety of search engines and techniques.
8. demonstrate e-mail basics including configuring Netscape for e-mail, sending, receiving, deleting messages, attaching files and opening attachments.
9. demonstrate the use of Internet chat by using Netscape Chat 2.0 for classroom discussions
10. demonstrate proper discussion board techniques of post and reply.
11. become familiar with current technology terminology.
12. build a web page using Netscape Composer, with embedded photo, image, and link.
13. demonstrate proper distance education web site use for future lessons via distance education.
14. particpate in a group collaboratory project that will benefit their home school or district.

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Taylor Technology for Teachers
FACULTY AND STAFF BULLETIN BOARD

This Bulletin Board can be used by faculty and staff for professional interaction about teaching ideas, professional development, topics from the monthly instructional modules, support, or other worthwhile topics of interest. To access the Interactive Bulletin Board, click on the link below.

Taylor Technology For Teachers Bulletin Board

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Taylor Technology For Teachers

[POST A TOPIC] [FAQ] [ADMINISTRATOR ONLY]

ENTER SEARCH CRITERIA BELOW

(Note Use and/or to narrow/broaden search Case insensitive)

Search Files | Reset

CURRENT MENU OF TOPICS

LIST TOPICS ONLY | Only Postings Since:

- parent involvement - **Faye Lashley** *14:11:52 6/25/98* (1)
  - Communities of Learning - **Debra L. Pahal** *14:54:46 6/25/98* (0)
- Saying Goodbye and Thanks! - **Debra L. Pahal** *18:52:29 6/22/98* (12)
  - Thanks - **Judy Dorman** *11:45:02 7/02/98* (0)
  - Saying goodbye - **Barbara Nash** *10:50:04 7/02/98* (0)
  - End of Class - **Cheryl Brantley** *10:22:49 7/02/98* (1)
    - End of class - **Norma McGuire** *10:37:29 7/02/98* (0)
  - Goodbye and Thanks - **Pat Dosher** *10:12:30 7/02/98* (0)
  - End of class - **Carol Tumlin** *10:07:28 7/02/98* (0)
  - End of workshop - **Ann Turner** *10:07:06 7/02/98* (0)
  - Thanks - **Kathy Roebuck** *09:56:19 7/02/98* (0)
  - Learning about computers - **Ellen Faircloth** *09:41:18 7/02/98* (0)
  - End of Workshop - **Barbara Drawdy** *21:12:57 6/28/98* (0)
  - End of Workshop - **Sabrina Guenthner** *12:54:56 6/23/98* (1)
    - good bye - **Kay Dudley** *10:04:47 7/02/98* (0)
- The 21st Century Learner - **Debra L. Pahal** *17:49:56 5/20/98* (4)
  - 21st centry teachers aide - **Kathy Roebuck** *10:04:36 7/02/98* (0)
  - Teacher role for the 21st learner - **Barbara Drawdy** *21:00:43 6/28/98* (0)
  - Teacher role for the 21st learner - **Pat Dosher** *20:28:44 6/03/98* (1)
    - You've Got It! - **Debra L. Pahal** *23:39:13 6/03/98* (0)
- Technology and the new Professional Teacher - **Bernice Island** *21:35:57 5/18/98* (2)
  - Help for Technology and the New Professional Teacher - **Ellen Faircloth** *09:55:22 7/02/98* (0)

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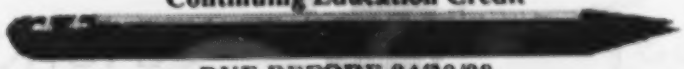
Taylor Technology for Teachers
APRIL INSTRUCTION MODULE
Continuing Education Credit



DUE BEFORE 04/30/98

This page contains the instruction for the above month. You will receive two continuing education points upon successful completion of this assignment. You are to complete the assignment during two one-hour planning periods at your school workstation using Netscape Navigator and the links and search engines provided at this site. Using the link to the template provided below and the instructions provided on the template, copy & paste the template into a blank word processing document. When finished, save your document to a floppy disk. Attach the completed assignment and e-mail to your instructor for credit. Good luck!!

Monthly Modules Template

April's Instructional Objectives

Upon completion of the two-hour lesson, the teacher will have...

1. **identified primary goals for creating a school web site**
2. **enhanced one lesson this month with some form of technology that is new and different to them**
3. **related how a school web site can connect the school with parents and the local community**
4. **expressed how school web sites may be used as a virtual field trip to unknown places**
5. **critically analyzed example school web sites for usability, interface, and readability**

Researching the Internet

1. **A school web site can be a wonderful resource tool as well as public relations tool to the outside world. From Now On, March 1997 issue, an educational technology journal will be our source this month for the instructional module. The link is below. You will use it and it's hot links to answer all your questions. From the information contained therein, list at least two primary goals that creating a school web site accomplishes. Be sure to support your goal with reasons.**

   http://fromnowon.org/mar97/why.html

2. **Review the link to Wiles Elementary school in Gainesville, Florida, from the electronic journal referenced above. Give several reasons that support the concept that a school web site is a public relations tool for the local community as well as the outside world.**
3. **How can a school web site become a vehicle for students, parents, or other visitors to take vitual field trips to unknown places. Using the referenced journal above, give several ways this can be accomplished.**

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Enhancing Classroom Teaching/Learning Through Professional Development and Research

1. **After researching the above link and its hot spots, give at least three reasons with supporting data that relate how you might be able to successfully use a school home page (linked from the district web page) at your school site. Be specific and give advantages that relate to your own school--even if you don't have Internet access within your classroom.**
2. **Critically analyze the Blackburn High School page and the Wiles Elementary School pages including the following data:**

   Usability and relativity of the links contained within each page.
   Readability of the information contained in the site.
   User interface (can you maneuver back and forth easily?).
   Format, style, and content of the web site.
   What did you like and not like about the site.

Current Events in the Teaching Content Areas

After study of this information and review of several school web sites, write a paragraph about how you could use a web page in your own classroom. If you don't have Internet access in your classroom, this is your chance to fantasize about what you would like to have. What would you put on the page, what color would it be, and what links would you include.

Technology Transfer

Write at least a paragraph about your school web page collaboratory project. How is it progressing, what will your design include on the main page, what are the links. If you are not involved in a school web page collaboratory project, report about some new technology you have begun using since starting this class.

Your Chance to Sound Off

1. **What did you enjoy about this instruction?**
2. **What did you not enjoy about this instruction?**
3. **What are your suggestions for improvement of the instructional modules that would best fit your content area?**
4. **Write a short critique of one paragraph about what went well and/or what went wrong with the new technology your incorporated into your classroom this month as a result of this instruction.**
5. **Were there any parts of this web site that did not work properly for you?**

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Taylor Technology for Teachers
Monthly Modules Template

So that all work will be standardized each month from student to student, a handy template to use for completing the monthly instructional modules follows. Choose edit "select all" or use your right mouse button and click "select all." Then using the "copy & paste" technique, copy this template to a blank word processing document BEFORE you begin work on your instructional module. Remember to minimize your word processing template and then begin work from the Internet. Please note that the icon links at the bottom of this page are for your convenience in returning to the other menus--they will not print in your word document. Use the template to fill in the identification information requested and answer the questions, save it to disk, and attach your work to an e-mail file to your instructor.

Name_____
Work address_____
E-mail address_____
Module Month_____
Date Submitted_____
Hours Spent Completing This Lesson_____
Date Returned by Instructor_____

RESEARCHING THE INTERNET:

ENHANCING CLASSROOM TEACHING/LEARNING THROUGH RESEARCH AND PROFESSIONAL DEVELOPMENT:

CURRENT EVENTS IN THE TEACHING CONTENT AREAS:

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TECHNOLOGY TRANSFER:

YOUR CHANCE TO SOUND OFF:

What did you enjoy about this instruction?

What did you not enjoy about this instruction?

What are your suggestions for improvement of the instructional modules that would best fit your content area?

Were there any parts of the web page that did not work properly for you?

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APPENDIX F

OPENING MEMO TO PARTICIPANTS

Technology for Teachers

Memo

To: Distance Education Training Participants

From: Debra L. Pahal

Date: 11/27/97

Re: Training Begins

Congratulations, you have signed up for the distance education training, Taylor Technology for Teachers! A total of 47participants from throughout the school district will be involved in this first-of-its-kind training program. I am excited about working with you. This memo is to explain the dates, times, and what will be involved. So, keep this memo for future reference. You have received this memo because you registered in early December. If you have had a change of plans and do not intend to participate, please telephone me immediately, so that I can remove your name from the participant's list. It is very important that you do this, as materials are being prepared for you right now.

I tried to group participants by school as most people indicated a beginner level for skills, with the exception of Group One. Those of you who listed intermediate skill level will be able to help the others. Because of the number of participants and the number of machines available in the computer lab with Internet access and Windows 95, I decided to go with four groups of eleven participants. This is also a good number to work with one-on-one in a lab situation. There will be two eight-hour days of hands-on skills training to prepare you for the distance education portion of the project. Before those two training days, you will need to do some preparation. I will be e-mailing you some assignments and forms to prepare. If you do not have e-mail access yet, I will send them via school mail. It is very important that you follow-through with the assignments so that you will be prepared for the training.

The groups and the dates for hands on training are listed below. All training will take place in the microcomputer lab, Building D, Technical Institute from 8:00 a.m. until 4:00 p.m. Building D is the one that fronts the main highway. Turn in the driveway to the left and park at the end of the building on the East Side. On the first day of class please bring with you paper, pen or pencil, a formatted floppy diskette and your completed assignments or materials requested. We will plan to take a one-hour lunch break and two 15-minute breaks. There are drink and snack machines in the lobby. There is also a microwave and refrigerator should you wish to bring snacks with you.

Now for a little about what to expect. You will be creating some items such as spreadsheets, databases, and graphics files that you can use in your own classroom. You will learn about how to use the distance education web site, how to e-mail, how to web search and research, and how to turn in your monthly lessons. You will learn about how to post and reply to messages on the web discussion board and will create a home page for inclusion on the school district web pages. Get ready to learn!!!

Group One: January 10 and February 7--Participants One through Twelve

Group Two: January 17 and February 21--Participants Thirteen through Twenty-Four

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Group Three: January 24 and February 28–Participants Twenty-Five through Thirty-Five

Group Four: January 31 and March 7–Participants Thirty-Six through Forty-Seven

Assignment for Class One for Each Group:

Write a short one-page biography of yourself to be shared at the first class meeting. This bio should include your technology background and your expectations from this training.

Bring a list of at least fifteen student's names, addresses, and telephone numbers for inclusion in a database you will create.

Create a class roster (can be a real or hypothetical one) listing names and scores for one class area (at least 15 students) covering three tests. For example, John Doe, 86, 68, 75.

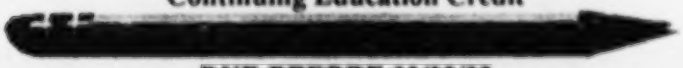
I realize that some of your are teachers aides. I would like these activities to be as beneficial as possible to you, so please feel free to improvise where needed.

APPENDIX G

PRINTOUT OF MONTHLY INSTRUCTIONAL MODULES

FROM WEB SITE

Taylor Technology for Teachers
FEBRUARY INSTRUCTION MODULE
Continuing Education Credit



DUE BEFORE 02/28/98

This page contains the instruction for the above month. You will receive two continuing education points upon successful completion of this assignment. You are to complete the assignment during two one-hour planning periods at your school workstation using Netscape Navigator and the links and search engines provided at this site. Using the link to the template provided below and the instructions provided on the template, copy & paste the template into a blank Word97 document. When finished, save your document to a floppy disk. Attach the completed assignment and e-mail to your instructor for credit. Good luck!!

Monthly Modules Template

February's Instructional Objectives

Upon completion of the two-hour lesson, the teacher will have...

1. **developed an awareness of the new role of the teacher in today's classroom**
2. **enhanced one lesson this month with some form of technology that is new and different to them**
3. **become more aware of the resources available for professional development in their particular teaching area**
4. **become familiar with the current CDA legislation and how it affects their particular teaching role and responsibilities**
5. **become aware of the ways that technology can enhance and improve their own classroom teaching and learning situation**

Researching the Internet

1. **The importance of computers in today's education has received increased attention in the past five years. Using some of the reference sources provided for you at this site, list ways you can incorporate computers into your particular classroom situation and curriculum area. Write at least one page about your research and list the sites that support your findings in your bibliography.**
2. **On-line information is abundant in most every teaching area today. Find one source for a lesson plan outline that relates to your teaching area and report on its contents and how you could possibly incorporate it into your classroom situation this month.**
3. **The nation that invests in its youth and teachers by giving them the tools to search for information, retrieve information, communicate information and make decisions based upon such exchanges will dominate the world. This is the public confidence. The Public Agenda Research Organization reports that eight out of ten people believe that computers are "essential elements" for school children. Using research you have conducted on the Internet, list and report on at least five other organizations that support and enhance technology teaching, learning, and training for the future of our school children.**

Enhancing Classroom Teaching/Learning Through Professional Development and Research

1. **A new role for the teacher has been identified--one of facilitator and coach, thus establishing a new relationship between teacher and pupil. Research some technological "tools" that could be used in your particular classroom situation to firmly establish this new role in an area you feel the most comfortable with in your classroom. Try out the new technique and report on its effectiveness.**
2. **Using the on-line journals and publications linked from this source, or your own Internet search, report (one page minimum) about one area of interest to your teaching situation that has shown an improvement in classroom learning through the use of current and emerging technologies. Relate how this might be incorporated into your own teaching situation.**
3. **Using one professional organization as an example, from your research on-line, provide concrete examples of how that particular organization strives to provide professional development activities for its members.**

Current Events in the Teaching Content Areas

This month's technology current event deals with Internet censorship and last year's Supreme Court ruling on the unconstitutionality of the CDA. Research and report (one page minimum) on the ruling and its effect on classrooms across America. Be sure to interject what you plan to incorporate into your classroom as safeguards in addition to the school district's acceptable-use policy.

Technology Transfer

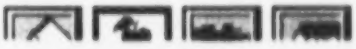
Write at least two paragraphs about one new (or rusty) technology skill that you have begun using in your own personal or professional development since you began this course.

Your Chance to Sound Off

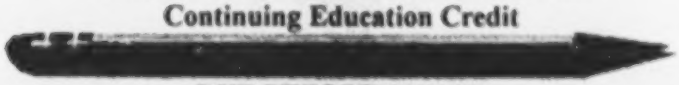
1. **What did you enjoy about this instruction?**
2. **What did you not enjoy about this instruction?**
3. **What are your suggestions for improvement of the instructional modules that would best fit your content area?**
4. **Write a short critique of one paragraph about what went well and/or what went wrong with the new technology your incorporated into your classroom this month as a result of this instruction.**
5. **Were there any parts of this web site that did not work properly for you?**

DUE BEFORE 02/28/98

E-Mail Your Lesson



Taylor Technology for Teachers
MARCH INSTRUCTION MODULE
Continuing Education Credit



DUE BEFORE 03/31/98

This page contains the instruction for the above month. You will receive two continuing education points upon successful completion of this assignment. You are to complete the assignment during two one-hour planning periods at your school workstation using Netscape Navigator and the links and search engines provided at this site. Using the link to the template provided below and the instructions provided on the template, copy & paste the template into a blank word processing document. When finished, save your document to a floppy disk. Attach the completed assignment and e-mail to your instructor for credit. To give you full credit, should you spend more than two hours, please indicate the time spent on this lesson when you turn it in. Good luck!!

Monthly Modules Template

March's Instructional Objectives

Upon completion of this lesson, the teacher will have...

1. **enhanced one lesson this month with some form of technology that is new and different to them.**
2. **become familiar with examples of lesson plans that can be used in their particular teaching area.**
3. **become aware of the constructivist theory, its definition, theorists, and uses in today's electronic classroom.**
4. **become aware of the importance of school and community involvement.**

Researching the Internet

***Note: You can copy and paste these references into your browser's location bar.**

1. **Define and contrast the role of the teacher and student in a constructivist classroom, using the following reference:**

   http://ciee.vuse.vanderbilt.edu/alnweb/magazine/issue1/sener/constrct.htm

2. **Contrast the constructivist classroom of tomorrow versus the traditional classroom of yesterday, using the following reference:**

   http://www.EDsOasis.org/Strategy/Construct.html

3. **Report on two famous constructivist theorists and describe the basis of their theory, using the following reference:**

   http://www-health.santafe.cc.fl.us/rc/FPD/SemThink.html

4. **Choose one topic area from the reference listed, describe it, and tell how it could be adapted for use in your own classroom situation.**

http://www.EDsOasis.org/Strategy/ConTeach.html

Enhancing Classroom Teaching/Learning Through Professional Development and Research

Find one lesson that is of interest to your teaching content area from the reference listed. Tell what resources and technology you will use to teach this lesson in your classroom.

http://www.EDsOasis.org/Treasure/Treasure.html

Current Events in the Teaching Content Areas

This month's technology current event deals with getting the school and the community involved in technology partnerships. Using the reference listed below, summarize what you might do to get your school involved in your local community.

http://www.benton.org/Library/Schools/four.html

Technology Transfer

Write at least two paragraphs about one new (or rusty) technology skill that you have begun using in your own personal or professional development since you began this course.

Your Chance to Sound Off

1. **What did you enjoy about this instruction?**
2. **What did you not enjoy about this instruction?**
3. **What are your suggestions for improvement of the instructional modules that would best fit your content area?**
4. **Write a short critique of one paragraph about what went well and/or what went wrong with the new technology your incorporated into your classroom this month as a result of this instruction.**
5. **Were there any parts of this web site that did not work properly for you?**

DUE BEFORE 03/31/98

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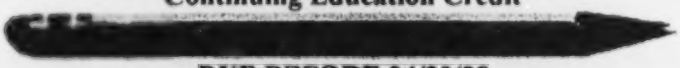
Debra L. Pahal
pahald@taylor.k12.fl.us

Taylor Technology for Teachers
APRIL INSTRUCTION MODULE
Continuing Education Credit



DUE BEFORE 04/30/98

This page contains the instruction for the above month. You will receive two continuing education points upon successful completion of this assignment. You are to complete the assignment during two one-hour planning periods at your school workstation using Netscape Navigator and the links and search engines provided at this site. Using the link to the template provided below and the instructions provided on the template, copy & paste the template into a blank word processing document. When finished, save your document to a floppy disk. Attach the completed assignment and e-mail to your instructor for credit. Good luck!!

Monthly Modules Template

April's Instructional Objectives

Upon completion of the two-hour lesson, the teacher will have...

1. **identified primary goals for creating a school web site**
2. **enhanced one lesson this month with some form of technology that is new and different to them**
3. **related how a school web site can connect the school with parents and the local community**
4. **expressed how school web sites may be used as a virtual field trip to unknown places**
5. **critically analyzed example school web sites for usability, interface, and readability**

Researching the Internet

1. **A school web site can be a wonderful resource tool as well as public relations tool to the outside world. From Now On, March 1997 issue, an educational technology journal will be our source this month for the instructional module. The link is below. You will use it and it's hot links to answer all your questions. From the information contained therein, list at least two primary goals that creating a school web site accomplishes. Be sure to support your goal with reasons.**

   http://fromnowon.org/mar97/why.html

2. **Review the link to Wiles Elementary school in Gainesville, Florida, from the electronic journal referenced above. Give several reasons that support the concept that a school web site is a public relations tool for the local community as well as the outside world.**
3. **How can a school web site become a vehicle for students, parents, or other visitors to take vitual field trips to unknown places. Using the referenced journal above, give several ways this can be accomplished.**

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Enhancing Classroom Teaching/Learning Through Professional Development and Research

1. **After researching the above link and its hot spots, give at least three reasons with supporting data that relate how you might be able to successfully use a school home page (linked from the district web page) at your school site. Be specific and give advantages that relate to your own school--even if you don't have Internet access within your classroom.**
2. **Critically analyze the Blackburn High School page and the Wiles Elementary School pages including the following data:**

   Usability and relativity of the links contained within each page.
   Readability of the information contained in the site.
   User interface (can you maneuver back and forth easily?).
   Format, style, and content of the web site.
   What did you like and not like about the site.

Current Events in the Teaching Content Areas

After study of this information and review of several school web sites, write a paragraph about how you could use a web page in your own classroom. If you don't have Internet access in your classroom, this is your chance to fantasize about what you would like to have. What would you put on the page, what color would it be, and what links would you include.

Technology Transfer

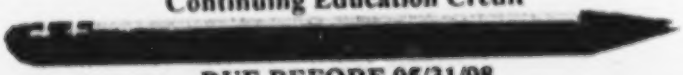
Write at least a paragraph about your school web page collaboratory project. How is it progressing, what will your design include on the main page, what are the links. If you are not involved in a school web page collaboratory project, report about some new technology you have begun using since starting this class.

Your Chance to Sound Off

1. **What did you enjoy about this instruction?**
2. **What did you not enjoy about this instruction?**
3. **What are your suggestions for improvement of the instructional modules that would best fit your content area?**
4. **Write a short critique of one paragraph about what went well and/or what went wrong with the new technology your incorporated into your classroom this month as a result of this instruction.**
5. **Were there any parts of this web site that did not work properly for you?**

DUE BEFORE 04/30/98

Taylor Technology for Teachers
MAY INSTRUCTION MODULE
Continuing Education Credit



DUE BEFORE 05/31/98

This page contains the instruction for the above month. You will receive two continuing education points upon successful completion of this assignment. You are to complete the assignment during two one-hour planning periods at your school workstation using Netscape Navigator and the links and search engines provided at this site. Using the link to the template provided below and the instructions provided on the template, copy & paste the template into a blank word processing document. When finished, save your document to a floppy disk. Attach the completed assignment and e-mail to your instructor for credit. Good luck!!

Monthly Modules Template

May's Instructional Module Objectives

Upon completion of the two-hour lesson, the teacher will have...

1. **enhanced one lesson this month with some form of technology that is new and different to them**
2. **described what is meant by "wired classroom"**
3. **become familiar with the characteristics of an engaged learner**
4. **listed advantages and reasons for the proper placement of computers in the wired classroom**
5. **described how the learners in a wired classroom are engaged and list some of the activities engaged in**
6. **described the teacher's role in the wired classroom** described the lesson framework in the wired classroom
7. **described the best types of assessments for the wired classroom**
8. **become aware of which information products are best for purchasing for the computers in the wired classroom**

This month's entire lesson will be based on the new technological concept of the "wired classroom." Our reference sources will be taken from From Now On, an educational technology journal found on the Internet. Use the following source until you are given another:

http://fromnowon.org/mar98/flotilla.html

Researching the Internet

1. **A "wired" classroom is much more than wires. Wires only connect hardware and software. Today's wired classroom is a technology-enhanced, student-centered classroom. Describe what the article suggests an educationally sound wired classroom would be like.**
2. **Name and describe some characteristics of engaged learners.**

3. **The Internet is a wonderful research tool, however, wired classrooms of today also need readily available software installed on school networks--just as the classroom of yesterday had those tools available on its bookshelves. Name and describe at least four of the tools that you might purchase for your wired classroom and list reasons why.**

Enhancing Classroom Teaching/Learning Through Professional Development and Research

1. **If we are to expect student-centered, engaged classrooms with technology blended into daily use, contrast several computer distribution schemes discussed in the article and list their advantages and disadvantages in classroom content technology blending.**

   For the rest of the questions, use the following source:

   http://fromnowon.org/mar98/flotilla2.html

2. **Describe some of the ways that students are engaged in the wired classroom.**
3. **Contrast the teacher of yesterday with the "wired" teacher.**
4. **What type of assessments and tests work best in the wired classroom? Describe in detail.**

Current Events in the Teaching Content Areas

Describe a typical lesson framework in a wired classroom.

Technology Transfer

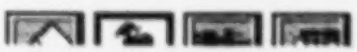
Write at least two paragraphs about how you might incorporate one form of technology into a lesson in a one-computer classroom that would involve all learners in active, engaged learning.

Your Chance to Sound Off

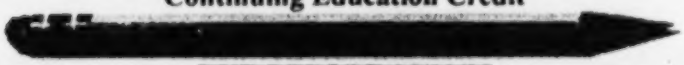
1. **What did you enjoy about this instruction?**
2. **What did you not enjoy about this instruction?**
3. **What are your suggestions for improvement of the instructional modules that would best fit your content area?**
4. **Write a short critique of one paragraph about what went well and/or what went wrong with the new technology your incorporated into your classroom this month as a result of this instruction.**
5. **Were there any parts of this web site that did not work properly for you?**

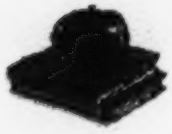
DUE BEFORE 05/31/98

E-Mail Your Lesson



Taylor Technology for Teachers
JUNE INSTRUCTION MODULE
Continuing Education Credit





DUE BEFORE 06/30/98

This page contains the instruction for the above month. You will receive two continuing education points upon successful completion of this assignment. You are to complete the assignment during two one-hour planning periods at your school workstation using Netscape Navigator and the links and search engines provided at this site. Using the link to the template provided below and the instructions provided on the template, copy & paste the template into a blank word processing document. When finished, save your document to a floppy disk. Attach the completed assignment and e-mail to your instructor for credit. Good luck!!

Monthly Modules Template

June's Instructional Module Objectives

Upon completion of the two-hour lesson, the teacher will have...

1. **enhanced one lesson this month with some form of technology that is new and different to them**
2. **described and listed reasons why technology changes the teacher-student relationship**
3. **become familiar with what technology requires of teachers**
4. **become familiar with the steps involved in preparing a successful lesson using Internet resources**
5. **listed the three general components of learning objectives as they apply to lesson content**
6. **created a lesson plan using Internet resources for their classroom**

This month's entire lesson will be based on developing lessons using resources from the Internet and how it affects the student-teacher relationship. The lesson will be taken from T.H.E. Journal (Technological Horizons in Education), an educational technology journal found on the Internet. Use the following source until you are given another:

http://www.thejournal.com/98/apr/498feat4.html

Researching the Internet

1. **From the article above, summarize some of things that technology requires of teachers and administrators today.**
2. **Explain some of the reasons why the article relates that technology requires that teachers and students become "partners in learning," thus changing the typical student-teacher relationship.**

Enhancing Classroom Teaching/Learning Through Professional

Development and Research

For the rest of the questions, use the following source:

http://www.thejournal.com/past/sep/996feat4.html

1. **List and describe the steps one must go through to create a successful lesson using Internet resources, as summarized in the article referenced above.**
2. **List three general components of learning objectives as they relate to lesson content.**

Current Events in the Teaching Content Areas

Using the steps listed in the article, create a simple lesson plan using Internet resources. The plan must include all the steps outlined above and must be something you would use in your own classroom teaching situation.

Technology Transfer

Relate in a paragraph how you have begun to use some form of technology in your classroom since beginning this course.

Your Chance to Sound Off

1. **What did you enjoy about this instruction?**
2. **What did you not enjoy about this instruction?**
3. **What are your suggestions for improvement of the instructional modules that would best fit your content area?**
4. **Write a short critique of one paragraph about what went well and/or what went wrong with the new technology your incorporated into your classroom this month as a result of this instruction.**
5. **Were there any parts of this web site that did not work properly for you?**

DUE BEFORE 06/30/98

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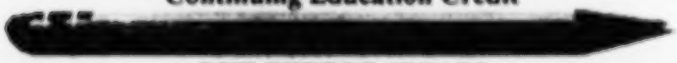
Taylor Technology for Teachers
JULY INSTRUCTION MODULE
Continuing Education Credit



DUE BEFORE 07/31/98

This page contains the instruction for the above month. You will receive two continuing education points upon successful completion of this assignment. You are to complete the assignment during two one-hour planning periods at your school workstation using Netscape Navigator and the links and search engines provided at this site. Using the link to the template provided below and the instructions provided on the template, copy & paste the template into a blank Word97 document. When finished, save your document to a floppy disk. Attach the completed assignment and e-mail to your instructor for credit. Good luck!!

Monthly Modules Template

July's Instructional Objectives

Upon completion of the two-hour lesson, the teacher will have...

1. **developed an awareness of the new role of the student in today's classroom**
2. **enhanced one lesson this month with some form of technology that is new and different to them**
3. **become more aware of the resources available for professional development in their particular teaching area**
4. **become aware of the ways that technology can enhance and improve their classroom learning situations for their students**

Researching the Internet

1. **The importance of computers in today's education has received increased attention in the past five years. Using some of the reference sources provided for you at this site, list ways you can incorporate technology (other than microcomputers) into your particular classroom situation and curriculum area. Write at least one page about your research and list the sites that support your findings in your bibliography.**
2. **On-line information is abundant in most every teaching area today. Find one source for a lesson plan outline that relates to your teaching area and report on its contents and how you could possibly incorporate it into your classroom situation this month.**
3. **The nation that invests in its youth by giving them the tools to search for information, retrieve information, communicate information and make decisions based upon such exchanges will dominate the world. Prepare a short report on your findings after researching the Internet on ways that students can become collaboratively involved in your classroom using technology.**

Enhancing Classroom Teaching/Learning Through Professional Development and Research

1. **A new role for the teacher has been identified--one of facilitator and coach, thus establishing a new relationship between teacher and pupil. Report on the ways the pupil's roles have changed with incorporation of this technology. Give specific examples to your own classroom experiences.**
2. **Using the on-line journals and publications linked from this source, or your own Internet search, report (one page minimum) about one area of interest to your teaching situation that has shown an improvement in student involvement through the use of current and emerging technologies. Relate how this might be incorporated into your own teaching situation.**

Current Events in the Teaching Content Areas

This month's technology current event deals with the changing role of the pupil in today's classroom. Research and report (one page minimum) on your findings and its effect in classrooms across America.

Technology Transfer

Write at least two paragraphs about one new (or rusty) technology skill that you have begun using in your own personal or professional development since you began this course.

Your Chance to Sound Off

1. **What did you enjoy about this instruction?**
2. **What did you not enjoy about this instruction?**
3. **What are your suggestions for improvement of the instructional modules that would best fit your content area?**
4. **Write a short critique of one paragraph about what went well and/or what went wrong with the new technology your incorporated into your classroom this month as a result of this instruction.**
5. **Were there any parts of this web site that did not work properly for you?**

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E-Mail Your Lesson

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APPENDIX H

PRINTOUT OF MAIN PAGES OF SCHOOL WEB SITE

COLLABORATORY PROJECTS

Taylor Technical Institute

Developing Tomorrow's Workforce Through Technology

3233 U. S. 19 South Perry, Florida 32347
Phone: 850-838-2545
Director: Kenneth A. Olsen

Director's Message
Faculty & Staff
School Advisory Committee
General Information
Student Services
Student Council
Student Home Pages
Annual School Activities
Financial Aid
Vocational Programs
Special Needs Program
High School Completion
Adult Ed. & GED
Technical Resource Center
Evening Programs
Associate Degrees
Business and Industry

For questions or comments in regard to this web site, please contact Debra Pahel

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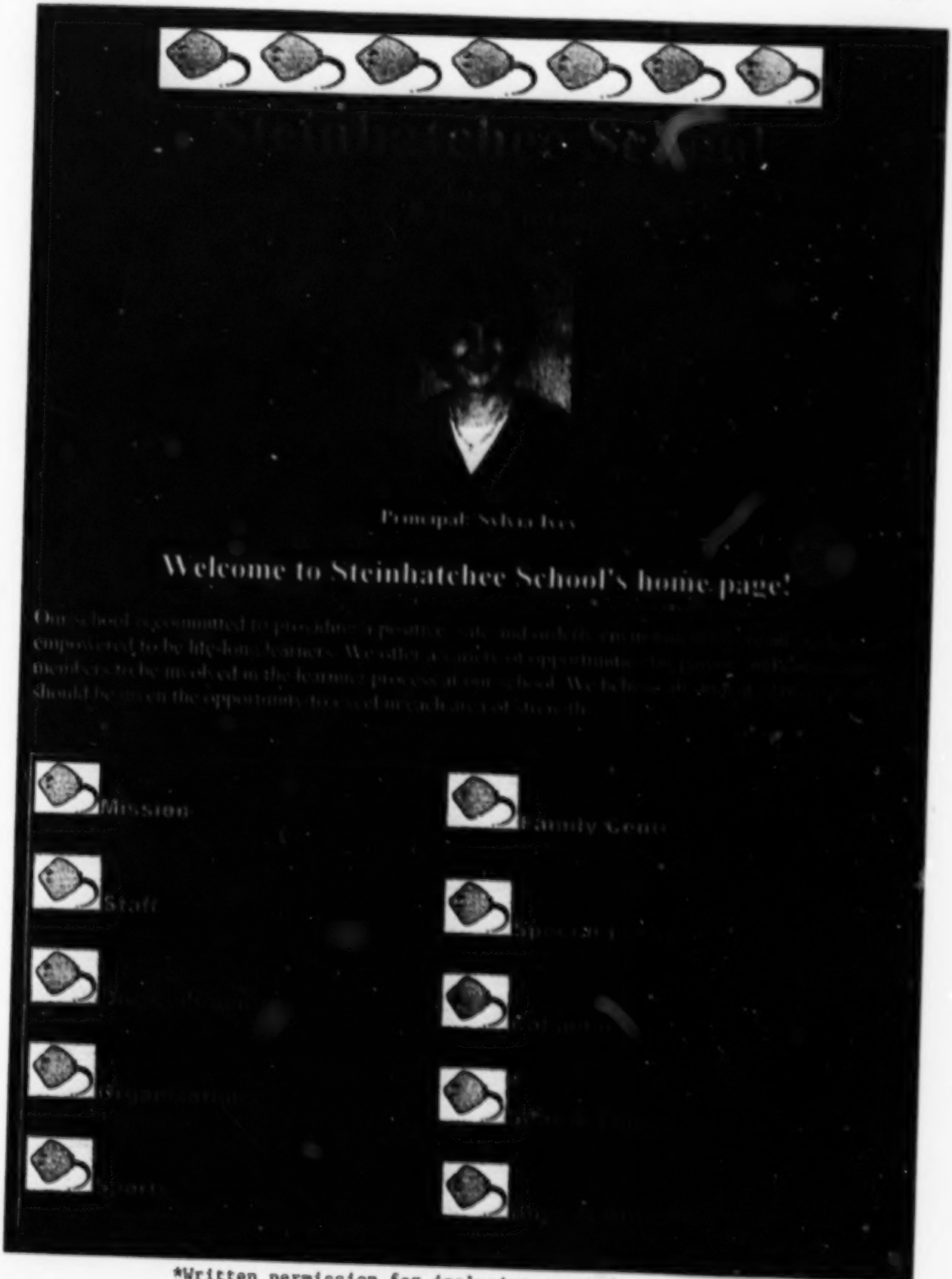

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Child Development Center - PRE-K

524 E. Lafayette Street
Perry, Fl 32347
1-850-838-2530

Welcome to the Child Development Center Pre-K

Director's Message | Information | Faculty & Staff

School Calendar | Learning Activities

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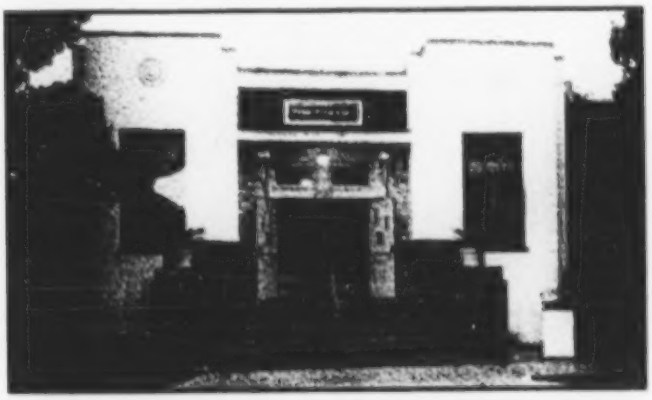
Perry Elementary School

"Preparing tomorrow's leaders today"



Principal -James E. Brannan
"Working together we can accomplish more."

- School History
- Faculty/Clusters
- Calendar
- Mission Statement
- Student Achievements
- Principal's Page

Send a message to the principal: brannaj@taylor.k12

<back

*Written permission for inclusion granted

Welcome To . . .

Gladys Morse Elementary School

Grades 3-5

800 West Ash Street Perry, Florida 32347

Telephone 1-850-838-2830

Fax 1-850-838-1379

- Principal
- Staff
- Student Population
- Student Activities
- Programs
- P.T.O.
- Volunteers
- Gladys Morse History
- Alma Mater
- Teacher Recognition
- School to Work
- News and Announcements

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APPENDIX 1

PRINTOUT OF TECHNOLOGY FOR TEACHERS

DISCUSSION BOARD

Taylor Technology For Teachers

[POST A TOPIC] [FAQ] [ADMINISTRATOR ONLY]

ENTER SEARCH CRITERIA BELOW:

(Note: Use and/or to narrow/broaden search. Case insensitive)

Search Files | Reset

CURRENT MENU OF TOPICS

LIST TOPICS ONLY | Only Postings Since: | Sep | 21

- secretary vs teachers pay - **Larry** *23:03:37 8/16/98* (1)
  - Teacher Pay - **Debra L. Pahal** *14:11:23 8/25/98* (0)
- parent involvement - **Faye Lashley** *14:11:52 6/25/98* (1)
  - Communities of Learning - **Debra L. Pahal** *14:54:46 6/25/98* (0)
- Saying Goodbye and Thanks! - **Debra L. Pahal** *18:52:29 6/22/98* (12)
  - Thanks - **Judy Dorman** *11:45:02 7/02/98* (0)
  - Saying goodbye - **Barbara Nash** *10:50:04 7/02/98* (0)
  - End of Class - **Cheryl Brantley** *10:22:49 7/02/98* (1)
    - End of class - **Norma McGuire** *10:37:29 7/02/98* (0)
  - Goodbye and Thanks - **Pat Dosher** *10:12:30 7/02/98* (0)
  - End of class - **Carol Tumlin** *10:07:28 7/02/98* (0)
  - End of workshop - **Ann Turner** *10:07:06 7/02/98* (0)
  - Thanks - **Kathy Roebuck** *09:56:19 7/02/98* (0)
  - Learning about computers - **Ellen Faircloth** *09:41:18 7/02/98* (0)
  - End of Workshop - **Barbara Drawdy** *21:12:57 6/28/98* (0)
  - End of Workshop - **Sabrina Guenthner** *12:54:56 6/23/98* (1)
    - good bye - **Kay Dudley** *10:04:47 7/02/98* (0)
- The 21st Century Learner - **Debra L. Pahal** *17:49:56 5/20/98* (4)
  - 21st centry teachers aide - **Kathy Roebuck** *10:04:36 7/02/98* (0)

- Teacher role for the 21st learner - **Barbara Drawdy** *21:00:43 6/28/98* (0)
- Teacher role for the 21st learner - **Pat Dosher** *20:28:44 6/03/98* (1)
  - You've Got It! - **Debra L. Pahal** *23:39:13 6/03/98* (0)

- Technology and the new Professional Teacher - **Bernice Island** *21:35:57 5/18/98* (2)
  - Help for Technology and the New Professional Teacher - **Ellen Faircloth** *09:55:22 7/02/98* (0)
  - Technology and the New Professional Teacher - **Judy Dorman** *21:47:26 5/19/98* (0)
- Pro-active Teachers--Fearless in the Face of Technology! - **Debra L. Pahal** *11:35:40 5/09/98* (4)
  - Technology and the new professional teacher - **Barbara Drawdy** *12:36:42 5/16/98* (0)
  - Technology and the new professional teacher - **Pat Dosher** *08:58:04 5/16/98* (1)
    - Ownership is the Key that unlocks the Future! - **Debra L. Pahal** *09:26:04 5/16/98* (0)
  - Technology and the New Professional Teacher - **Ann Turner** *08:52:21 5/16/98* (0)
- Web Page - **Bernice Island** *19:54:50 5/03/98* (1)
  - E-Mail - **Kathy Roebuck** *11:26:50 5/08/98* (0)
- Putting the Cart Before the Horse!! - **Debra L. Pahal** *08:50:24 4/28/98* (5)
  - Putting the Cart Before the Horse!! - **C. B.** *11:38:22 5/16/98* (0)
  - Cart before the horse - **Ann Turner** *08:41:27 5/16/98* (0)
  - cart before the horse-wired classroom - **Pat Dosher** *08:40:42 5/16/98* (0)
  - Cart before the horse - **Judy Dorman** *22:20:13 5/08/98* (0)
  - wired classrooms - **Kathy Roebuck** *11:11:48 5/08/98* (0)
- What's in a Web Page? - **Debra L. Pahal** *07:23:40 4/03/98* (8)
  - Web Site uses - **Kathy Roebuck** *11:17:19 5/11/98* (0)
  - Web Sites - **Barbara Drawdy** *19:23:44 4/29/98* (0)
  - Web Page - **C. B.** *12:04:39 4/25/98* (0)
  - web pages - **Lana Norberg** *10:58:19 4/25/98* (1)
    - Web Pages - **Judy Dorman** *22:26:09 5/08/98* (0)
  - Homepage Response - **Barbara Nash** *10:32:59 4/25/98* (0)
  - Web site attractions - **Ann Turner, Carol Tumlin** *21:31:11 4/24/98* (0)
  - web page - **Pat Dosher** *15:38:32 4/24/98* (0)
- Your Technology Wish List - **Debra L. Pahal** *22:27:11 3/22/98* (8)
  - Technology Wish List - **C.B.** *11:42:23 5/16/98* (0)
  - wish list. - **Judy Dorman** *17:20:40 4/02/98* (1)
    - wish list - **Lana Norberg** *11:07:10 4/25/98* (0)
  - New Technology - **Ellen Faircloth** *19:51:20 4/01/98* (0)
  - New Technology - **Kathy Roebuck** *12:19:17 3/26/98* (2)
    - technology responses - **Kathy Roebuck** *15:20:13 4/24/98* (0)
    - Wish Lists - **Kathy Roebuck** *15:15:43 4/24/98* (0)
  - Technology Wish list - **ALesia Flickinger** *13:14:18 3/24/98* (0)
- Not Just Computers... - **Debra L. Pahal** *08:00:47 3/07/98* (5)

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- Not just computers - **Kathy Roebuck** *15:45:59 6/03/98* (0)
- Not Just Computers - **Lana Norberg** *15:02:41 3/21/98* (0)
- Technology in the Pre-K Classroom - **Cheryl B.** *13:52:51 3/21/98* (0)
- Not just computers - **Judy Dorman** *13:34:58 3/21/98* (0)
- Technology in Pre-K Classroom - **Barbara Nash** *13:27:34 3/21/98* (0)

- Week's Topic: How do you involve parents and community in your Technology Conquests? - **Debra L. Pahal** *09:04:19 3/02/98* (7)
  - Parent Involvement - **Donna Clingan** *20:03:35 3/23/98* (0)
  - Parent Involevment - **Barbara Nash** *14:03:33 3/21/98* (1)
    - Parent Involvement - **Lana Norberg** *15:13:54 3/21/98* (0)
  - Parent Involvement - **Judy Dorman** *13:42:45 3/21/98* (3)
    - Parent Involvement - **Ellen Faircloth** *17:30:51 4/07/98* (0)
    - Excellent Ideas... - **Debra L. Pahal** *22:11:37 3/22/98* (1)
      - Parent Involvment - **Kathy Roebuck** *13:17:38 5/14/98* (0)

- How Do You Use the Internet in Your Classroom? - **Debra L. Pahal** *19:37:05 2/25/98* (10)
  - Internet in the classroom - **Brenda Jackson** *19:13:10 3/23/98* (0)
  - Internet in the classroom - **Barbara Nash** *16:53:05 2/27/98* (0)
  - How I Use Internet In My Classroom? - **Cheryl Brantley** *16:39:08 2/27/98* (0)
  - INTERNET IN CLASSROOM - **LANA NORBERG** *16:35:07 2/27/98* (0)
  - Internet in classroom - **Judy Dorman** *16:25:19 2/27/98* (1)
    - Internet in classroom - **Judy Dorman** *16:32:13 2/27/98* (0)
  - Internet in the classroom - **Barbara Drawdy** *12:05:44 2/26/98* (3)
    - Internet in classrooms - **Mary A Williams** *18:53:05 2/26/98* (1)
      - Technology and the new Professional Teacher - **Bernice Island** *14:18:02 5/17/98* (0)
    - Internet Monitoring - **Bernice Island** *18:40:37 2/26/98* (0)

- Internet Censorship Issues for Children - **Debra L. Pahal** *08:35:22 2/02/98* (5)
  - Internet Censorship - **Judy Dorman** *16:43:28 2/27/98* (0)
  - Restricted access - **Janet McCroan** *12:16:25 2/09/98* (3)
    - Internet censorship for children - **Barbara Nash** *14:19:03 3/21/98* (0)
    - Closing the Avenues... - **Debra L. Pahal** *19:33:33 2/25/98* (1)
      - censorship on computers - **Kathy Roebuck** *11:13:21 5/11/98* (0)

- Deshelving: public library - **Shirley Titus** *15:50:14 1/31/98* (1)
  - Books - **Deanna Lamb** *15:05:52 2/07/98* (0)
- Computer Training - **Cheryl Brantley** *15:51:29 1/24/98* (2)
  - technology in classrooms - **Kathy Roebuck** *15:49:39 6/03/98* (0)
  - technology in classrooms (computers)/ - **Kathy Roebuck** *08:48:48 5/30/98* (0)
- Welcome to our Board!!! - **Debra Pahal** *10:34:51 12/30/97* (10)
  - Fetc Conference - **Ellen Faircloth** *10:21:54 3/06/98* (0)
  - Computer Training - **Vicky Carmichael** *15:59:52 1/31/98* (3)

- Student Internet Use - **Debra L. Pahal** *17:20:56 1/31/98* (2)
  - technology in classrooms - **Kathy Roebuck** *11:18:36 5/08/98* (0)
  - Internet Use in the Classroom - **Shirley Titus** *08:26:32 2/09/98* (0)
- Reading - **Sabrina Guenthner** *15:46:02 1/31/98* (0)
- Thank You - **Sandy Parker** *15:39:46 1/17/98* (3)
  - Technology for Teachers - **Ellen Faircloth** *15:50:33 1/31/98* (0)
  - Teachers Should Help Others - **Collette L. Keeton-Jones** *15:44:31 1/17/98* (1)
    - Appreciation to Deb and Ms. Jones - **Kathy Roebuck Ese Aide** *11:23:04 5/08/98* (0)

Post A Topic

YOUR NAME :

EMAIL ADDR:

YOUR TOPIC:

POST YOUR MESSAGE HERE:

OPTIONAL LINK :

***URL:

*TITLE:

IMAGE:

APPENDIX J

COPY OF PARTICIPANT CERTIFICATE

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APPENDIX K

SUMMATIVE EVALUATION INSTRUMENT

Taylor Technology for Teachers Distance Delivery Training Participant Summative Evaluation Checklist

This form will be used by the instructor as a means of assessing whether or not the instruction, materials, and web site should be modified for the next class. Place a checkmark in the appropriate column in response to each question.

Instructor, Training and Materials	Yes	No
Was the instruction offered congruent with the needs/goals of the district?		
Were the instructional materials used congruent with the needs/goals of the district?		
Were the training materials complete and concise?		
Were the training materials accurate and easy to use/understand?		
Were the training materials current and up-to-date?		
Were the training materials compatible with the software/equipment available in the school district?		
Were the training packet and handouts congruent with the instruction offered?		
Was the instruction interesting and motivating?		
Did the instructor provide for individual learning differences?		
Was the transfer of learning after instruction favorable?		
Was the instructor knowledgeable of the subject matter being taught?		
Did the instruction increase your use of e-mail for communication purposes?		
Did the instruction increase the use of technology within your classroom curriculum?		
Did the instruction increase your understanding of the Internet and its use in education?		
Was the instruction too short or sketchy?		
Was the instruction too long or uninteresting?		
Web Site and Distance Delivery Mode	**Yes**	**No**
Was the design (colors, graphics, fonts) of the web site appealing to you?		
Was the web site easy to navigate?		
Was the distance delivery mode effective for the material being taught in this instruction?		
Were all links and information working and current?		
Monthly Instructional Modules	**Yes**	**No**
Were the monthly instructional modules interesting and motivating?		
Were the monthly instructional modules too long?		
Were the monthly instructional modules relevant to your content area or expertise?		
Did you use the template for completion of the lessons?		
Did you use the e-mail links provided?		
Overall Impressions of the Course	**Yes**	**No**
Would you recommend this course to your co-teachers and peers?		
Did this course meet or exceed your expectations?		
Will the training benefit you professionally and/or personally in the future?		
Was the instruction paced for the average student?		

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APPENDIX L

COPY OF ELECTRONIC WEEKLY ACTIVITY LOG

Applied Dissertation Weekly Activity Log

Month 1/Week 1 (December 1-7, 1997)

During this week, I began implementation of my applied dissertation. I started by sending out, through inter-school mail, a memo to the school district Principals and attaching copies of the informational flyer and registration form for distribution to the teachers in their schools. I also sent copies to my verifier at MIS. I sent a memo and copies of what was sent to the Principals to Director of Teacher Training and Certification at the Superintendent's office. I began to create the spreadsheets for grading, recordkeeping, etc. I also contacted my University about Bulletin Board setup. The Distance Education web site I created was placed as a link on the school district home pages this week.

Month 1/Week 2 (December 8-14, 1997)

Registration was held this week so that teachers could come by the school and talk with me or call to talk with me on the telephone about which group they should be placed in as far as skill levels. I continued creating the spreadsheets and forms needed during this eight-month phase. I also started revising the distance education web pages that were created for the multimedia class I did this summer. Creation of the hard copy version of the on-line handbook was also begun. Registration progressed well. By the end of the week, I had 47 people enrolled for the training.

Month 1/Week 3 (December 15-21, 1997)

Began forming the groups for the basic skills training. Entered all names and addresses into the registration spreadsheet. Bulletin Board was linked to the distance education pages. Put a welcome message on it for when the teachers return. School is currently on break. Worked updating the web sit.

Month 1/Week 4 (December 22-28, 1997)

Began preparing the instruction for the basic skills classes. Items will have to be photocopied. A handbook is being prepared for the training while teachers are on break.

Month 2/Week 1 (December 29, 1997-January 4, 1998)

All teachers were grouped and contacted as to when their group would receive skills training. This was done by opening letter. Some notices were e-mailed to the teachers who had an e-mail address. Others were telephoned. Continued building the manual and web site.

Month 2/Week 2 (January 5-11, 1998)

Teachers were e-mailed and invited to participate in the discussion board and new/announcements page before their first hands-on training. Continued to develop the materials such as printed handbook, syllabus and resource materials. Upgraded the web site with all current information. Planned first day of training and developed a web page for initial training day.

Month 2/Week 3 (January 12-18, 1998)

Continued updating web pages, created a training plan and objectives and put on-line for the two-day orientation session. Photocopied all handouts and prepared the lab for the first training day. Went over all materials myself to familiarize me with what I would teach. Conducted the first hands-on eight-hour session with the 13 teachers in Group One. Very, very successful. All teachers improved and made 100%

on post test in Excel. All evaluations were very favorable and encouraging. I feel they really walked away with more refined skills.

Month 2/Week 4 (January 19-25, 1998)

Continued preparing training materials and photocopying information. Began developing the hard copy of the handbook that all participants will receive at their second hands-on training. Typed all lesson plan notes for my personal records. Installed NSChat 2.0 on the computer lab computers so that we could practice chat in the hands-on training using the Nova server. Photocopied all materials for the rest of the hands-on training classes. Conducted the first 8-hour training session for Group Two. This was a hard class as none of the teachers had ANY computer experience! They were unable to keep up, as half of the teachers talked and laughed and could not follow the written instructions or would not listen to the directions.

Month 3/Week 1 (January 26-February 1, 1998)

Continued handbook development and updating of web pages. Conducted the 8-hour training session for Group Three class. This class was much easier as all had computer skills and mouse skills and all but one had e-mail and used the Internet. They were very inquisitive and asked lots of questions! Some didn't like Excel exercise as they used grading software called Classmaster and they griped. All in all, though, it was a good session.

Month 3/Week 2 (February 2-8, 1998)

Conducted the last of the initial 8-hour workshops this week. This was Group Four and included people from my own worksite and a few extras. They were more advanced than any of the other participants. Once again, the only problem I had was a couple of them had the "sillies" and my co-worker that was helping me kept it going. I as exasperated by the end of the day. We finished 45 minutes early today because they were more advanced. They also asked lots of questions, but liked the Excel spreadsheet. In all, I got good reviews and am really glad that that portion of the training is over now. Doing the workshop four times has made me a professional at it and it is really amazing that it runs basically the same timewise with all groups.

Month 3/Week 3 (February 9-15, 1998)

There will be no face-to-face class this week, as I will be attending classes at Nova this week. However, I continued developing the on-line handbook for updating to the distance education web site. Posted a message on the web discussion board for all participants to respond to. This message was in regard to Internet Censorship issues. I want to see how different teachers handle this in their classroom. Sent an e-mail to all participants about this to try to get the discussion going. Some are still a little timid about posting the messages. Replied and monitored messages that were posted during this week. Attended my practicum seminar at Nova where I presented a 5-minute talk on my implementation progress.

Month 3/Week 4 (February 16-22, 1998)

Continued to develop the on-line handbook. Teachers are beginning their distance education lessons and have e-mailed me questions. Some are saying that the lessons are more than 2 hours long. Will have to adjust their CEU's earned or shorten lessons. Scanned the pictures being sent to me for the web pages we will begin this Saturday. On Saturday, the first class of the second session was held. All teachers learned e-mail use, attaching files, Internet searching, electronic classroom chat, and created a home page for inclusion on the faculty home pages site. Only thing that went wrong was Page Composer in Netscape would not seem to work properly when a link was made. This caused technical problems with the pages.

Month 4/Week 1 (February 23-March 1, 1998)

Scanned the next class photos, updated the web site with the teacher's home pages, and began developing the spreadsheets for the skills classes pre/post test results. Continued updating the web site with the glossary link, March lesson, more faculty home pages, and more info in the on-line handbook. Conducted a one-hour training session for six students who felt they needed the extra practice. Conducted my second training day for Group Two on Saturday of this week. It went ok. Most were still very lacking in skills and this caused all to be slowed down somewhat during class demonstrations. This group has no computers in their classrooms and will need to come to the vo-tech to do their lessons. Home page creation went ok. They loved NSChat. On-going message board discussion on how the Internet is currently being used in classroom across the district and ideas on how to handle Internet access for children. Very good responses.

Month 4/Week 2 (March 2-8, 1998)

Continued to update the web site. Continued Bulletin Board discussions. Eight-hour training session for the Group Three was held this Saturday. All were very focused teachers who were very successful in doing all the activities. Most did not want a personal web page on the teacher's web site, so began to work on their collaborative projects instead--which are school web pages. Some of the participants also came to class during the week while I was at night class so that I could help them with things such as cut and paste and web searching.

Month 4/Week 3 (March 9-14, 1998)

Updated web page with new home pages, new links, and new announcements. Last eight-hour training session was held for the Group Four. All went well. This group is hard to work with due to one student acting silly. They really got into the web searching and spent over an hour collecting gifs for their home pages. E-mail was not as effective as there were some teachers who did not have e-mail addresses and could not do the activities. There was also a class in the lab before we started and we got started late due to everyone visiting with each other. Sent all participants an e-mail message about the collaboratory projects and the face-to-face meetings scheduled for next Saturday for the March session. Should be getting in March distance education lessons this week, also. Received some nice e-mail from participants who are using the technologies learned in the training already. No activity on the discussion board this week.

Month 4/Week 4 (March 15-21, 1998)

Updated web pages with more home pages and more announcements. Continuing bulletin board discussions and participants e-mailing me for support. Also, some participants came out to my Monday/Wednesday night class for help in basic skills as they are beginning their distance education lessons this week. On-going collaboratory projects at each school site. E-mailed participants about Saturday's four hour hands-on face-to-face session for feedback and interaction. Saturday's class went well. Approximately half of the participants were in attendance. Received my first lessons via e-mail from some participants this week and it was very exciting--both to me and them--to see this idea really working. The chat software should be installed in the most remote school this next week and will plan to get that group together for a feedback session as their March instructional module lessons come in.

******DISSERTATION MID POINT******

Month 5/Week 1 (March 22-29, 1998)

Compiled and mailed in my practicum mid-point progress report. I can hardly believe it is half over with already, as these past few months have gone by really fast. This week there is no face-to-face meeting. The lessons for March are beginning to come in via e-mail. I spent this time grading the lessons, giving feedback via e-mail, giving on-line support via e-mail and telephone to those having questions on how to

complete and e-mail the lessons, and preparing the instruction for the April Module. Posted a new message to the discussion board and e-mailed all participants to participate. I also sent out a listserv message to the school district about some of the research my group is using that is of interest to all educators on lesson planning.

Month 5/Week 2 (March 30-April 4, 1998)

Spent this week grading e-mailed lessons from the March instructional module and giving feedback to students. Also kept the on-line discussion board going and posted a new message for the week. Some students came to my lab at the vo-tech to work this week and I helped them with searching and skills development. Created the April lesson for the instructional modules page, updated the news/announcements page. Talked with Director of Instruction by telephone and we agreed to turn in the CEU's for all students this month. Kept spreadsheets for CEU credits updated this week.

Month 5/Week 3 (April 5 – 11, 1998)

Began working on the May instructional module and the creation of the basic skills training spreadsheets for the practicum report. Recreated my database of practicum participants e-mail addresses that I lost in the hard drive crash a few weeks ago. E-mailed all participants about their CEU's and that we would fill out and sign sheets to send to the District office for renewal of their teaching licenses this month at the face-to-face meeting. Posted a new bulletin board message for participant response. Some participants came to the vo-tech this week for skills training during my night classes.

Month 5/Week 4 (April 12-18)

Finished up the May and June instructional modules on the web pages. Finished up the creation and compilation of the basic skills training spreadsheets and graphs for use in the practicum report. Finished filling out all participants CEU authorization sheets for the school district and photocopied so they are ready for their signatures. Sent all copies out by inter-school mail. Began receiving April lessons through e-mail this week.

Month 6/Week 1 (April 19-25)

Students were working on the April module and I assisted during night classes and through e-mail and telephone calls. Ended the week with the April four-hour face-to-face meeting. All participants brought me their signed staff development reports for the CEU credit. Meeting went extremely well. All participants gathered to work on their collaboratory projects and receive feedback and advice on how to go about tying it all together. These projects are coming along nicely. Students are gathering the icons, graphics, etc., and making their storyboards for the school web sites. Received April lessons via e-mail, graded, and e-mailed feedback to all.

Month 6/Week 2 (April 26-May 2)

Some students came to night class sessions to finish up their distance education lessons. Lessons still coming in through e-mail. Graded and e-mailed feedback those received. Updated web site news and announcements page and posted new discussion board topic. Students began working on their May lesson by distance education this week. Collaboratory projects are on-going at each school site. It is hoped that all pictures, graphics, and info for web pages will be collected by the first week of June so that each group can begin creating their school sites.

Month 6/Week 3 (May 3-9)

On-going discussion board and students working on their May lesson via the Internet. Some students attended night classes for extra hands-on help. Collaboratory projects at school sites continue.

Month 6/Week 4 (May 10-16)

Monthly lessons are coming in via e-mail and the discussion board topics are on-going. Graded and gave feedback on lessons via e-mail. Had a 4-hour face-to-face session with all participants on Saturday. Each group also discussed their accomplishments on the collaboratory web pages for their school. Today they began collecting the graphics and creating their storyboards. Invited my verifier to attend the session but she did not come by.

Month 7/Week 1 (May 17-23)

Monthly lessons continued coming in by e-mail and some students attended night classes this week to get help with basic skills training. Discussion continued on the message board. I also posted a new message this week. Graded and gave feedback on May lesson. Added new announcements to the news/announcements board.

Month 7/Week 2 (May 24-30)

This is the last week of school for teachers and everyone is gearing up for summer now. I went to Group One School and installed the chat software on the computers so those teachers could communicate with me if needed, as they are the most remote school site. Monthly distance education lessons for May keep coming in and I graded and gave feedback. Some June lessons are also coming in as teachers are preparing for vacations. Discussion board interaction continues. I spent time updating the News and Announcements Page and adding some graphics to the Resources page on the web site. I also created a colorful certificate with all my web site logo on it to present to the participants on the last day of class. E-mail feedback continues to be strong.

Month 7/Week 3 (May 31-June 4)

June lessons are coming in via e-mail this week. I spent time grading these and giving feedback. I also spent time working on my practicum report corrections that Dr. Goldman requested. Discussion board topics still continue to be popular. I also updated the web site with some extra graphics. A few students came to the vo-tech to work on their collaboratory home web page assignments.

Month 7/Week 4 (June 5-11)

Continued receiving June lessons by e-mail, gave feedback. Discussion board topic continues. Students are busy collecting their information, pictures, and graphics for their collaboratory projects. We will begin to put those together the last week of June.

Month 8/Week 1 (June 12-18)

June lessons and discussion board continue. Gave feedback via e-mail. Had a 4-hour face-to-face meeting on Saturday for participants to wind up their collaboration and plans for the web site projects. Discussed when each group would meet to put the pages together next week. Worked on creating and printing special certificates to present at the last meeting and plans for that special district "show and tell" session. Updated the news/announcements page.

Month 8/Week 2 (June 19-25)

June lessons coming in by e-mail. Gave feedback. Discussion board continues. Teachers are working on their collaboratory web projects and came to the school for picture scanning and gif collection and

instruction on web page development. Finished up printing certificates to give to participants and sent to the district office for signatures.

Month 8/Week 3 (June 26-July 2)

Worked on getting the web sites into the school server. June lessons and discussion board continues. Some collaboratory projects are being completed now. Director of Teacher Training called and asked me to redo the training for the district teachers next semester and I agreed--this time with pay!

Month 8/Week 4 (July 3-9) PRACTICUM END

Held the final four-hour face-to-face meeting. All participants and their Principals were in attendance. The School Superintendent and MIS Director, my on-site verifier, was also there. It was a show and tell time for the participants to show off what they did. Culmination of all activities with feedback and on-line evaluation was completed. Participants signed their Staff Development Reports for the CEU's, also. We had refreshments and a good time. Participants informally shared their technology incorporation experiences recorded in their personal portfolios. The superintendent gave a little speech about how rewarding this must have been due to the enthusiasm shown on this day. Principals and MIS director were very excited about the school web sites. On-line evaluations were all very favorable. I feel this has been a success in all ways. Participants were also asked to complete a summative evaluation instrument in their leisure time and send back via school mail--I did not want to rush this important feedback, as it will be used to improve the course for the next semester when it will be offered again.

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